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AIR FORCE OFFICE OF SCIENTIFIC RESEARCH/XPT
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AIR FORCE OFFICE OF SCIENTIFIC RESEARCH

RESEARCH PROPOSAL

QUARTERLY STATUS REPORT

OCTOBER - DECEMBER 1993

RESEARCH PROPOSAL

QUARTERLY STATUS REPORT

FOURTH QUARTER 1993

INTRODUCTION

The Research Proposal Quarterly Status Report is published quarterly (March, June, September, and December) by the Air Force Office of Scientific Research (AFOSR). It lists all the research proposals received by AFOSR during the past six months along with the action taken (Initiated, Declined or Withdrawn on each report).

The report is divided into two parts. The Institution Index lists proposals alphabetically by institution. This is followed by a more detailed listing by Directorate, and by Program Manager within the Directorate.

PURPOSE

This report is designed to inform other Government sponsoring agencies of the proposals received by the AFOSR and the action taken on these proposals. Readers must keep in mind that declined proposals should not necessarily be considered as scientifically unacceptable; many declinations result from a lack of funds or as a result of special programmatic emphasis.

AFOSR MISSION

The Air Force Office of Scientific Research (AFOSR) is the single manager of the Air Force Defense Research Sciences Program (Program Element 61102P) and the primary Air Force agency for the extramural support of fundamental scientific research. To sponsor and sustain basic research and ensure access to research results in support of the Air Force goals of control and maximum utilization of air and space. The AFOSR is organized under the Director, Science and Technology, Air Force Materiel Command.

AFOSR awards grants and contracts for research in areas of science relevant to the needs of the Air Force. Research is selected for support from proposals received in response to the Broad Agency Announcement originating from scientists investigating problems involving the search for new knowledge and the expansion of scientific principles. Selection is on the basis of scientific potential for improving Air Force operational capabilities, originality, significance of science, the qualification of the principal investigator, and the reasonableness of the proposed budget.

KEY TO READING THE DATA

Title - The title of the research proposal.

Institution - The organization, (e.g., college/university, company) at which the research will be conducted.

Investigator - The Principal Investigators proposing the research.

Type - N indicates a new research effort.

R indicates a continuation of an ongoing research effort.

Months - The duration of the research proposal.

Received - The month and year in which the AFOSR received the proposal.

Amount - The funds requested of the AFOSR for support of the research proposal.

Status - A - ACCEPTED indicates that the review has been completed and the proposal recommended for funding.

- D - DECLINED indicates the proposal has been reviewed but will not be funded by the AFOSR.

- BLANK SPACE - indicates the proposal is being reviewed.

- W - WITHDRAWN indicates that the proposal submitted was removed from further consideration at the proposer's request.

Program Manager - The AFOSR scientific staff member assigned the responsibility for the technical evaluation of the proposal.

Proposal # - An AFOSR Directorate assigned control number to uniquely identify the research proposal.

Initiate - The proposal has been recommended to the AFOSR Directorate of Contracts for the amount and duration.

Start Date - The recommended date for commencement of the research.

Total Amount - The estimated number of dollars recommended for support of the research effort, the actual amount is subject to negotiation.

PART 1

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|--------------------------------------|--------------|------------|--------|-----------|--------|-----------|
| Marquette College | Schaaff | William | | 94-NE-062 | D | SCHLOSSER |
| Duke University | Loros | Jennifer | J | 94-NL-008 | A | HADDAD |
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| Scientific Research Associates, Inc. | Grubin | Harold | L | 94-NE-086 | A | WITT |
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| | William | Kasper | | 94-NA-043 | D | JONES |
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| | McJohnough | James | H | 94-NA-041 | D | SAKELL |
| | Stroaber | Arnold | J | 94-NR-018 | D | SJOGREN |
| | Agrawala | Ashok | K | 94-NR-056 | D | WAKSMAN |
| | Deletky | Gregory | | 94-HE-080 | D | WITT |
| | Hendler | James | | 94-NR-060 | D | WAKSMAN |
| | Slud | Eric | | 94-NR-072 | D | SJOGREN |
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| | Chang | Ching | S | 94-NA-004 | D | LEWIS |
| | Ganz | Aura | | 94-NR-034 | D | SUDARTH |
| | Riseman | Edward | H | 94-NR-040 | D | WAKSMAN |
| | Dannister | William | | 94-NC-004 | A | HEDBERG |
| | Ting | John | H | 94-NA-029 | A | LEWIS |
| | Cernstain | Dennis | S | 94-NR-037 | A | JACOBS |
| | Chattacharyya | Pallab | | 94-HE-026 | A | WITT |
| | Kamlesh | Terry | | 94-NA-053 | D | BIRKAN |
| | Katehi | Linda | P | 94-NA-036 | D | NACHMAN |
| | Neubert | Torsten | | 94-NL-039 | A | KROLL |
| | Smith | Edward | E | 94-NL-006 | A | TANGNEY |
| | Cohen | Philip | | 94-HE-019 | A | PORRENKE |
| | Goldman | Allen | H | 94-NE-051 | D | WEINSTOCK |
| | Sinha | Sumon | | 94-NA-019 | D | FANT |
| | Dasu | Asit | P | 94-NR-057 | A | SJOGREN |
| | Connolly | John | H | 94-NI-007 | A | HART |
| | Defacio | Brian | | 94-NA-043 | A | SJOGREN |
| | Handel | Peter | | 94-NE-010 | A | WITT |
| | Shattacharyya | Prabir | | 94-NA-023 | A | SJOGREN |
| | Haerschaeft | Mark | | 94-NR-065 | D | NACHMAN |
| | drueck | Steven | | 94-NE-040 | A | SCHLOSSBER |
| | Ondohoe | Gregory | | 94-NL-005 | D | TANGNEY |
| | Jain | Ravinder | | 94-NE-043 | A | SCHLOSSBER |
| | Tapscott | Robert | | 94-NC-050 | A | HEDBERG |
| | Hirshman | Elliot | | 94-NL-006 | D | MCMICHAEL |
| | Jumper | Eric | J | 94-NA-047 | D | PORRENKE |
| | Porod | Wolfgang | | 94-HE-017 | D | HADDAD |
| | Suzan | Maja | | 94-NL-009 | A | ERSTFELD |
| | Asher | Sanford | A | 94-NC-031 | A | TANGNEY |
| | Chi | Michelleone T.-H. | | 94-NL-041 | D | COLLINS |
| | Furman | Joseph | H | 94-NL-033 | A | BERMAN |
| | Mukamel | Shawn | | 94-NC-039 | A | WEINSTOCK |
| | Sobolewski | Roman | | 94-NE-050 | D | TANGNEY |
| | Engle | Randall | | 94-NL-045 | A | DICKINSON |
| | Owens | Thomas | | 94-NL-025 | A | JACOBS |
| | You | Tuncheng | | 94-NR-091 | D | SAKELL |
| | Kunc | Joseph | A | 94-NA-035 | A | WAKSMAN |
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| | Redekopp | Larry | | 94-NA-044 | A | DICKINSON |
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| INSTITUTION | INVESTIGATOR | FIRST NAME | MIDDLE | LAST NAME | PROPOSAL | STATUS | PR NAME |
|--|--------------|------------|--------|-----------|-----------|--------|------------|
| Univ of Southern Mississippi | Steier | William | | | 94-NE-077 | A | SMITH |
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| Univ of Texas | Keifer | Dennis | J | | 94-NA-063 | A | BIRKAN |
| Univ of Texas Health Science Ctr | Powers | Edward | J | | 94-NE-022 | D | SMITH |
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| Univ of Toronto | Cooke | Daniel | E | | 94-NH-032 | D | SHUDDARTH |
| Univ of Toronto | Mrosovsky | Nicholas | E | | 94-NL-011 | D | HADDAD |
| Univ of Utah | Armentrout | Peter | E | | 94-NE-006 | D | KELLEY |
| Univ of Virginia | Johnston | William | A | | 94-NL-001 | D | TANGNEY |
| Univ of Virginia | Nairn | John | A | | 94-NA-077 | D | JONES |
| Univ of Virginia | Horgan | Cornelius | O | | 94-NC-033 | A | NACHMAN |
| Univ of Wisconsin | Hose | J. | O | | 94-NC-019 | A | WARD |
| Univ of Wisconsin | Moore | Robert | R | | 94-NL-054 | A | HADDAD |
| Univ of Wisconsin | Nandhakumar | Nagaraj | J | | 94-NA-041 | D | WAKSMAN |
| Univ of Wisconsin | Nandhakumar | Nagaraj | J | | 94-NC-050 | A | WAKSMAN |
| Univ of Wisconsin | Richards | Mercedes | H | | 94-NL-063 | A | RADOSKI |
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| Univ of Washington | Kuroseka | | | | 94-NA-054 | D | FANT |
| Univ of Washington | Riley | James | | | 94-NA-059 | D | TISHKOFF |
| Univ of Washington | Schmid | Peter | | | 94-NA-055 | A | LEWIS |
| Univ of Washington | Edil | Tuncer | | | 94-NA-026 | A | CRAIG |
| Univ of Wyoming | Saleh | Bahaa | E | | 94-NE-071 | A | KOZUMBO |
| Univ of Wyoming | Petersen | Nancy | S | | 94-NL-021 | A | DICKINSON |
| University of Alabama | Schatzman | James | | | 94-NL-027 | A | NACHMAN |
| University of Idaho | Jones | Stanley | E | | 94-NC-061 | A | LEE |
| University of Idaho | Hotzger | Robert | E | | 94-NC-043 | D | KOZUMBO |
| University of Idaho | Crawford | Ronald | E | | 94-NC-055 | A | HEDEBERG |
| Utah State University | Shreeve | Jeanne | H | | 94-NC-035 | D | JACOBS |
| Vanderbilt University | Gunderson | K. | H | | 94-NM-077 | D | WEINSTOCK |
| Virginia Polytechnic Inst & State Univ | Hikago | John | | | 94-NE-043 | A | MART |
| Virginia Polytechnic Inst & State Univ | Agarwal | Krishnan | | | 94-NI-003 | A | JACOBS |
| Virginia Polytechnic Inst & State Univ | Burns | John | | | 94-NH-022 | A | JONES |
| Virginia Polytechnic Inst & State Univ | Claus | Richard | | | 94-NA-046 | D | JONES |
| Washington State University | Kohler | Werner | E | | 94-NA-031 | A | NACHMAN |
| Washington State University | Murphy | Kent | A | | 94-NE-075 | D | SCHLOSSBER |
| Washington State University | Nayseh | A | | | 94-NA-076 | A | WU |
| Washington State University | Ng | Vina | | | 94-NA-023 | A | FANT |
| Washington State University | Simpson | Roger | | | 94-NA-018 | D | FANT |
| Washington State University | Ariyamannan | K. | | | 94-NA-074 | D | GLASSMAN |
| Washington State University | Dickinson | J Thomas | | | 94-NA-005 | A | JONES |
| Washington State University | Kurzyk | Mark | | | 94-NC-042 | A | LEE |
| Washington State University | Olsen | Larry | | | 94-NE-063 | D | POMRENKE |
| Washington State University | Ramapriyan | Selakavadi | | | 94-NA-021 | D | FANT |
| Washington State University | Krchnavek | Robert | | | 94-NE-064 | D | CRAIG |
| Washington State University | Arasu | K. | | | 94-NM-013 | D | SJOGREN |

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| Chen | C. Phillip | | 94-NA-017 | A | GLASSMAN |
| Grandhi | Ramana | V | 94-NA-064 | A | WU |
| Cheng | Richard | K | 94-NA-069 | A | FISHKOFF |
| Rosner | Daniel | E | 94-NA-002 | A | FISHKOFF |

Yale University

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| TITLE (CONC.) | INVESTIGATOR | TYPE/MONTHS RECEIVED | STATUS | INITIATE DATE |
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| TITLE (CONC.) | INVESTIGATOR | AMOUNT | PROGRAM MANAGER | TO TOT ART |
| TRANSPORT PHENOMENA AND INTERFACIAL KINETICS IN MULTIPHASE COMBUSTION SYSTEMS | Rosner | N 36 26/10/93 \$468,250 | A TISHKOFF 94-MA-002 | \$148,836 15/02/94 \$468,250 |
| PROPOSAL FPP RFSEARCH ON SUPERSONIC REACTING FLOWS | Daniel | N 36 27/10/93 \$624,000 | A TISHKOFF 94-MA-003 | \$196,429 01/02/94 \$624,000 |
| STANFORD University | Craig | | | |
| EFFECT OF SURFACE FORCES IN THE MECHANICS OF MATERIALS WITH MICRO-SIZE PARTICLES | Ching | N 36 27/10/93 \$259,867 | A LEWIS 94-MA-004 | |
| UNIV OF MASSACHUSETTS | Chang | | | |
| STUDIES OF DEFORMATION AND FRACTURE AT METAL-CERAMIC INTERFACES | J Thomas | R 36 28/10/93 \$227,039 | JONES 94-MA-005 | |
| Washington State University | Dickinson | | | |
| Mechanics of composite materials | Carlos | N 12 29/10/93 \$60,000 | A JONES 94-MA-006 | \$60,000 01/01/94 \$60,000 |
| Naval Research Laboratory | Sanday | | | |
| TURBULENCE-CHEMISTRY FOR HIGHLY TURBULENT FLAMES | Sanjay | N 36 01/11/93 \$326,992 | A TISHKOFF 94-MA-007 | \$6,764 01/02/94 \$326,992 |
| General Electric Co | | | | |
| NONLINEAR DYNAMICS OF HIGH REYNOLDS NUMBER JOURNAL LAYER CHAOS | Henry O T | N 36 08/11/93 \$286,505 | MCMICHAEL 94-MA-008 | |
| Univ of California, San Diego | Abarbanel | | | |
| MULTIRESOLUTION ANALYSIS IN THE THEORY AND EXPERIMENTAL STUDY OF STRUCTURAL DYNAMIC SYSTEMS | Andrea | N 36 09/11/93 \$241,533 | D MU 94-MA-009 | |
| Texas Engineering Experiment Station | | | | |
| ROUST CONTROL OF AEROSPACE STRUCTURES | Steven | N 36 09/11/93 \$223,860 | MU 94-MA-010 | |
| Massachusetts Institute of Technology | Hill | | | |

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| NONLINEAR NORMAL MODES AND LOCALIZATION IN FLEXIBLE PERIODIC ASSEMBLIES | Univ of Illinois | A | N 36 10/11/93 \$166,160 | WU | 94-MA-011 | | |
| GLOBAL INPUT-OUTPUT BEHAVIOR AND UNCERTAINTY IN CONTROLLED STRUCTURES | Univ of California, Santa Barbara | Bayo | Edwardo | N 37 10/11/93 \$160,800 | WU | 94-MA-012 | |
| FLUORESCENT DIAGNOSTICS AND FUNDAMENTAL DROPLET PROCESSES | Spray Research Office | Mann | David | N 36 12/11/93 \$240,000 | FISHKOFF | A | \$80,000 15/11/93 \$240,000 |
| (AASERT-FV94) CRYOGENIC SPRAY COOLING IN SUPERCONDUCTING AND HYBRID CIRCUITS | Univ of Kentucky | Chow | Louis | N 36 23/11/93 \$166,161 | FANT | D | |
| (AASERT-FV94) CONTROL OF FLOW IN COMPRESSORS BY SUCTION | Massachusetts Institute of Technology | Kerrebrock | Jack | N 36 23/11/93 \$120,127 | FANT | A | \$116,045 01/07/94 \$120,127 |
| (AASERT-FV94) UNSTEADY HEAT TRANSFER ON THE TURBINE RESEARCH FACILITY AT WRIGHT LABS | Syracuse University | LaGraff | John | N 36 23/11/93 \$121,139 | FANT | A | \$121,121 01/07/94 \$121,139 |
| (AASERT 94) THEORY AND EXPERIMENTS FOR FLUID-STRUCTURE-CONTROL INTERACTION PHENOMENON IN EVOLUTIONARY SYSTEMS | Texas A and M University | Strganac | Thomas | N 24 23/11/93 \$217,952 | WU | 94-MA-017 | |
| (AASERT FV-94) REDUCTION OF GAS TURBINE BLADE/HUB HEAT TRANSFER USING A FENCE DEVICE | Virginia Polytechnic Inst & State Univ | Simpson | Roger | N 36 23/11/93 \$108,247 | FANT | D | |
| (AASERT-FV94) EDUCATING STUDENTS IN THE DEVELOPMENT OF INNOVATIVE FLOW SEPARATION CONTROL TECHNOLOGY | Univ of Mississippi | Sinha | Sumon | N 36 23/11/93 \$108,541 | FANT | D | |

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| (MABCU) THERMAL-ELECTRIC PROPULSION WITH MAGNETOPLASMADYNAMIC ACCELERATION | Hampton University | Tabibi Sagher | N 48 23/11/93 \$632,204 | A BIRKAN 94-MA-020 | \$166,421 01/05/94 \$632,204 |
| (AASERT-FY94) "ARTIFICIAL INTELLIGENCE" APPROACH TO THE STUDY OF UNSTEADY FLOW CONTROL | Washington State University | Raspoprian Selakavadi | N 36 23/11/93 \$138,356 | D FANT 94-MA-021 | \$88,272 01/07/94 |
| HIGH PRESSURE COMBUSTION STUDIES UNDER COMBUSTION-DRIVEN OSCILLATORY FLOW CONDITIONS | Pennsylvania State University | Santoro Robert | N 36 23/11/93 \$242,472 | A BIRKAN 94-MA-022 | \$124,472 01/07/94 |
| (AASERT-FY94) EXPERIMENTAL & NUMERICAL STUDIES OF UNSTEADY HEAT TRANSFER IN A TRANSONIC TURBINE | Virginia Polytechnic Inst & State Univ | Wing | N 36 24/11/93 \$100,262 | D FANT 94-MA-023 | \$100,103 01/07/94 |
| TRANSIENT MANEUVERS | Pennsylvania State University | Williams Ronaldo | N 36 24/11/93 \$136,730 | D FANT 94-MA-024 | \$108,262 01/07/94 |
| (AASERT-FY94) PARALLEL FINITE ELEMENT ALGORITHM FOR SIMULATION OF DEFORMATION AND FLUID FLOW IN GRANULAR MATERIALS | Stanford University | Edil Tuncer | N 36 24/11/93 \$136,300 | D LEWIS 94-MA-025 | \$132,100 01/06/94 |
| (AASERT-FY94) CONSTITUTIVE MODELING OF PARTICULATE MEDIA-STRUCTURE INTERFACE | Univ of Wisconsin | Edil Dvorkin | N 36 29/11/93 \$132,180 | D LEWIS 94-MA-026 | \$132,100 01/06/94 |
| (AASERT-FY94) AN AUGMENTATION TO THE AIR FORCE SUPPORT IN SOIL | Stanford University | Jack Leonard | N 36 29/11/93 \$264,555 | D LEWIS 94-MA-027 | \$163,646 01/06/94 |
| (AASERT-FY94) AUGMENTATION FOR BASIC RESEARCH ON VAPOR TRANSPORT IN SOIL | Cornell University | Lion | N 36 29/11/93 \$166,034 | A LEWIS 94-MA-028 | \$166,034 |

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| CAASERT-FY94) BEHAVIOR OF MULTIPHASE GRANULAR MEDIA: MODELING F4T STATIC-TO-VISCUS FLOW REGIME Univ of Massachusetts at Lowell Ting | John | N 36 29/11/93 \$55,748 | LEWIS 94-NA-029 | 655,748 01/06/94 \$55,748 | |
| CAASERT 94) CONTRIBUTIONS OF AUTOMIZATION, VAPORIZATION AND COMBUSTION TO LIQUID ROCKET Pennsylvania State University Micci | Michael I | N 36 29/11/93 \$126,944 | BIRKAN 94-NA-030 | 6126,944 01/07/94 \$126,944 | |
| CAASERT 94) CHARACTERIZATION OF HIGH-SPEED IMPINGING JET ATOMIZATION IN HIGH PRESSURE AND TEMPERATURE ENVIRONMENT Poulikakos Univ of Illinois - Chicago | Dimes | N 24 29/11/93 \$74,935 | BIRKAN 94-NA-031 | 574,435 01/07/94 \$74,435 | |
| CAASERT 94) STUDENT SUPPORT FOR RESEARCH IN ACOUSTIC-FLOW INTERACTIONS IN SOLID RACKET MOTORS Mahalingam Univ of Colorado | Shankar | N 24 29/11/93 \$93,184 | BIRKAN 94-NA-032 | | |
| CAASERT 94) GRADUATE SUPPORT FOR STUDIES OF NONSTEADY PROPELLANT COMBUSTION Univ of Colorado Branch | Melvyn | N 24 29/11/93 \$92,071 | BIRKAN 94-NA-033 | | |
| CAASERT 94) MECHANICS AND MATERIALS STUDIES OF NANOSTRUCTURAL MATERIALS Michigan Technological University Aifantis | Elias | N 24 30/11/93 \$160,613 | JONES 94-NA-034 | 5160,613 01/07/94 \$160,613 | |
| CAASERT-FY94) TRANSFER OF VIBRATIONAL ENERGY IN MOLECULAR COLLISIONS Univ of Southern California Kunc | Joseph | N 36 30/11/93 \$125,153 | SAKELL 94-NA-035 | | |
| CAASERT 94) PRESSURE DEPENDENCE OF SOOT PARTICLE SIZE Univ of Dayton Becker | Roger | N 24 30/11/93 \$70,307 | TISHKOFF 94-NA-036 | | |
| CAASERT-FY94) LAMINAR-TURBULENT TRANSITION IN HIGH-SPEED COMPRESSIBLE BOUNDARY LAYERS WITH CURVATURE Purdue University Schneider | Steven | N 36 30/11/93 \$145,364 | SAKELL 94-NA-037 | 5145,364 01/06/94 \$145,364 | |

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| | | | | |
| CAASERT94) SUPPORTED DILAYER LIPID MEMBRANE-GASED BIOSENSORS USING DIELECTRIC QUARTZ CRYSTALS Michigan State University | Tien H | N 24 30/11/93 \$178,754 | JONES 94-MA-038 | \$196,691 30/06/94 \$196,691 |
| CAASERT-FY94) DEVELOPMENT OF PULSE-PURST LASER SOURCE & DIGITAL IMAGE PROCESSING FOR MEASUREMENTS OF HIGH-SPEED TIME-EVOLVING FLOW Princeton University | Richard Miles | N 36 30/11/93 \$196,691 | A SARELL 94-MA-039 | \$196,691 30/06/94 \$196,691 |
| CAASERT-FY94) DIRECT NUMERICAL SIMULATION OF SHOCKWAVE TURBULENT BOUNDARY LAYER INTERACTION Univ of Alabama | Chuny T J | N 36 30/11/93 \$95,552 | SAKELL 94-MA-040 | |
| CAASERT-FY94) ADDITIVE TURBULENT DECOMPOSITION OF THE THREE- DIMENSIONAL NAVIER STOKES EQUATIONS Univ of Kentucky | McDough James | N 36 30/11/93 \$81,693 | | |
| CAASERT-FY94) TURBULENCE MODELING/TRAINING Cornell University | Lunley John | N 36 30/11/93 \$151,032 | A MCMICHAEL 94-MA-042 | \$150,858 01/06/94 \$151,032 |
| CAASERT94) EXPERIMENTAL AND COMPUTATIONAL STUDIES OF PROGRESSIVE DEGRADATION Univ of Colorado | William Kasper | N 36 30/11/93 \$232,605 | JONES 94-MA-043 | |
| CAASERT-FY94) AERODYNAMIC FLOW VECTORING FOR HIGH LIFT CONTROL Univ of Southern California | Larry Redekopp | N 36 01/12/93 \$138,715 | A MCMICHAEL 94-MA-044 | \$138,715 01/06/94 \$138,715 |
| CAASERT94) TRAINING OF MSC STUDENTS IN TRANSIENT THERMO- MECHANICAL ANALYSIS OF STRUCTURAL COMPOSITES Alabama A&M University | Saha Pabitra | N 24 01/12/93 \$83,493 | JONES 94-MA-045 | |
| CAASERT94) FIBER SENSOR SYSTEM FOR BALLISTIC IMPACT ANALYSIS Virginia Polytechnic Inst & State Univ | Claus Richard | N 36 01/12/93 \$142,700 | JONES 94-MA-046 | |

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| CAASERT-FY94) TURBULENCE-INDUCED, FAR-FIELD OPTICAL DEGRADATION Univ of Notre Dame | Juniper Eric | N 36 01/12/93 \$94,616 | N 36 01/12/93 \$94,616 | MCMICHAEL 94-MA-047 | |
| CAASERT) CLIP-ON SAPPHIRE EXTENSOMETER FOR HIGH TEMPERATURE MATERIALS ANALYSIS Virginia Polytechnic Inst & State Univ | Claus Richard | N 36 01/12/93 \$142,700 | N 36 01/12/93 \$142,700 | JONES 94-MA-048 | |
| CAASERT94) TEMPERATURE, TRACE SPECIES, AND PHASE CONJUGATION IN DROPLETS AND SPRAYS Yale University | Chang Richard | N 36 01/12/93 \$105,293 | N 36 01/12/93 \$105,293 | TISMKOFF 94-MA-049 | \$106,536 15/07/94 \$105,293 |
| CAASERT 343 IGNITION AND FLAME STABILIZATION IN HIGH-SPEED FLOWS Princeton University | Law Chung | N 36 01/12/93 \$153,000 | N 36 01/12/93 \$153,000 | TISMKOFF 94-MA-050 | \$153,001 15/07/94 \$153,001 |
| CAASERT94) GLOBAL BIFURCATIONS IN NONLINEAR MECHANICAL SYSTEMS AND EXPERIMENTAL VERIFICATION Univ of Illinois | Nareshivaya Nearatnam | N 24 01/12/93 \$109,097 | N 24 01/12/93 \$109,097 | WU 94-MA-051 | \$109,097 15/07/94 \$109,097 |
| CAASERT94) MODERN METHODS FOR LOW-ORDER MODELS IN NONLINEAR STRUCTURAL DYNAMICS Cornell University | Moen Francis | N 36 01/12/93 \$206,633 | N 36 01/12/93 \$206,633 | WU 94-MA-052 | \$205,897 15/07/94 \$206,633 |
| CAASERT-FY94) AUTOMATED EXCAVATION Carnegie-Mellon University | Simsons Reid | N 36 01/12/93 \$207,055 | N 36 01/12/93 \$207,055 | LEWIS 94-MA-053 | D D FANT 94-MA-054 |
| EXPLOITATION OF THE HAIRPIN VORTEX-INDUCED TORNADO EFFECT FOR FILM COOLING Univ of Washington | Kuroseki H | N 36 02/12/93 \$296,638 | N 36 02/12/93 \$296,638 | | |
| STABILITY CHARACTERISTICS OF YOUNDED GRANULAR SHEAR FLOW Univ of Washington | Schmid Peter | N 36 02/12/93 \$292,227 | N 36 02/12/93 \$292,227 | LEWIS 94-MA-055 | |

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| 400FLING OF LIQUID JET ALUMINIZATION PROCESSES | | Stephen | R 24 02/12/93 \$108,426 | A BIRKAN 94-NA-056 | 8107-403 01/01/94 0108-426 |
| Purdue Research Foundation | | Hoister | | | |
| TO STUDY NEW SOURCE OF UNSTEADY LOADS ON FAN, COMPRESSOR, AND TURBINE BLADES | Cover | Eugene | N 24 03/12/93 \$202,245 | MU 94-NA-057 | 8117-022 01/01/94 0222-245 |
| Massachusetts Institute of Technology | | | | | |
| THEORETICAL INVESTIGATIONS OF PLASMA PHYSICS ISSUES IN THE HALL THRUSTER | | Terry | N 36 06/12/93 \$353,971 | BIRKAN 94-NA-058 | |
| Univ of Michigan | Kanesh | | | | |
| CASSERT94) INVESTIGATION OF LAMINAR FLAMELET MODEL OF TURBULENT DIFFUSION FLAMES | Riley | James | N 36 07/12/93 \$136,489 | TISM OFF 94-NA-059 | |
| Univ of Washington | | | | | |
| CASSERT94) DEVELOPMENT OF A TECHNIQUE TO DETERMINE THE MORPHOLOGY & DYNAMICS OF AGGLOMERATES IN CHEMICALLY REACTING FLOWS | | Tryfon Charalampopoulos | N 36 07/12/93 \$122,792 | TISM OFF 94-NA-060 | |
| Louisiana State University | | | | | |
| CASSERT94) DEVELOPMENT OF ADVANCED THERMAL AND ELECTRIC PROPULSION | Tabibi | Becher | N 36 07/12/93 \$75,123 | BIRKAN 94-NA-061 | |
| Hampton University | | | | | |
| CASSERT94) DIMENSIONALITY AND SPATIAL CONVERGENCE IN THE DYNAMICS OF FLEXIBLE IMPACT OSCILLATORS | | Joseph Cusimano | N 36 07/12/93 \$94,517 | MU 94-NA-062 | |
| Pennsylvania State University | | | | | |
| TRANSPORT PROPERTIES FOR ARC JET PLASMAS | Keefer | Dennis | N 24 10/12/93 \$159,789 | A BIRKAN 94-NA-063 | 8155-523 15/09/94 0131-315 |
| Univ of Tennessee / Space Institute | | | | | |
| CASSERT94) DESIGN OPTIMIZATION OF ADAPTIVE STRUCTURES FOR EFFECTIVE AIRCRAFT CONTROL | | Ramana Grandhi | N 36 20/12/93 \$101,812 | MU 94-NA-064 | |
| Wright State University | | | | | |

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| (AASERT94) CONSTITUTIVE EQUATIONS AT HIGH TEMPERATURES | | | N 36 20/12/93 \$111,521 | WU | 94-NA-065 |
| Georgia Tech Research Corporation | Serdichevsky | Victor | | | |
| (AASERT94) ACHIEVING A FUNDAMENTAL UNDERSTANDING OF HYBRID NEURAL NETWORK SYSTEMS FOR MULTI-LINK FLEXIBLE STRUCTURE CONTROL | | | N 36 21/12/93 \$106,413 | WU | 94-NA-066 |
| Stanford University | Cannon | Robert | | | |
| (AASERT94) DEVELOPMENT OF A HYBRID NEURAL NETWORK CONTROLLER FOR A TIME-VARYING SYSTEM | | | N 36 21/12/93 \$106,413 | WU | 94-NA-067 |
| Stanford University | Cannon | Robert | | | |
| CEMENT LINE INTERPHASE EFFECTS ON THE DYNAMIC MECHANICAL BEHAVIOR OF HAVERIAN COMPACT BONE TISSUE | | | N 12 21/12/93 \$252,184 | JONES | 94-NA-072 |
| Texas A and M Research Foundation | Hogan | H. | | | |
| MECHANICS OF MATERIALS AND INTERFACES IN MICROELECTRONIC DEVICES | | | N 36 21/12/93 \$255,333 | JONES | 94-NA-073 |
| Florida Institute of Technology | Liu | Sheng | | | |
| IMPROVED MODELING OF UNSTEADY HEAT TRANSFER | | | N 02 01/06/94 \$10,979 | JONES | 94-NA-074 |
| Christian Brothers University | Driver | Mark | | | |
| FRACTURE AND FATIGUE BEHAVIOR OF FIBER REINFORCED CERAMIC COMPOSITES UNDER REVERSAL OF LOADING | | | N 36 21/12/93 \$140,500 | JONES | 94-NA-075 |
| Air Force Institute of Technology | Hall | Shankar | | | |
| NONLINEAR VIBRATIONS, STABILITY, AND DYNAMICS OF STRUCTURES | | | N 12 21/12/93 \$5,000 | JONES | 94-NA-076 |
| Virginia Polytechnic Inst & State Univ | Mayfeh | A | | | |
| VIBROMECHANICS ANALYSES OF SINGLE-FIBER EXPERIMENTS CAN GIVE A BETTER UNDERSTANDING OF THE FIBER/MATRIX INTERFACE IN COMPOSITES | | | N 36 21/12/93 \$225,234 | JONES | 94-NA-077 |
| Univ of Utah | Mairn | John | | | |

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| | | | | N | 36 |
| CHEMICAL REACTIONS IN TURBULENT MIXING FLOWS California Institute of Technology | Dimitakis Paul | 23/12/93 \$1,349,203 | TAKEOFF 94-NA-078 | 9492322 16/05/94 \$1,349,203 | |
| FAILURE INITIATION AND INSTABILITY OF SOLID ROCKET PROPELLANT STRAIN UNDER IGNITION LOADING Lehigh University | Sih George | 27/12/93 \$251,775 | JONES 94-NA-079 | | |

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| | | | | | |
| RECOVERY AND RECYCLE OF 4,4'-BIS(PHthalide) BIS(PROPYLDENE) COMPOSITE MATERIALS ANHYDROUS Li6-F1 FROM FLUORINATED COMPOSITE MATERIALS General Electric Co | Caruso Andrew | N 36 01/10/93 \$449,954 | A HEDBERG 94-NC-001 | \$169,951 01/04/94 \$449,954 | |
| MICROSTRUCTURE EVOLUTION AND MECHANICAL BEHAVIOR OF Y-TIAL PROCESSING BY SPRAY ATOMIZATION AND DEPOSITION | Lavernia E.J. | N 36 04/10/93 \$425,260 | A WARD 94-NC-002 | \$160,487 01/03/94 \$425,260 | |
| FUNCTIONALLY GRADED INFILTRATED INTERCONNECTED METAL/CERAMIC COMPOSITES | Mortensen Andreas | N 36 04/10/93 \$479,692 | A WARD 94-NC-003 | | |
| HIGH TEMPERATURE COMPOSITES BASED ON NANOCRYSTALLINE MATRICES | S. United Technologies Research Center | N 36 06/10/93 \$1,003,740 | PECHENIK 94-NC-004 | | |
| SYNTHESIS OF ULTRAFINE PARTICLES FOR HIGH-STRENGTH CERAMICS | G. Mills | N 36 13/10/93 \$304,377 | PECHENIK 94-NC-007 | | |
| NONVOLATILE PRECURSORS TO ALTERNATIVE HALON FIRE EXTINGUISHING AGENTS | Bennister William | N 36 20/10/93 \$375,000 | A HEDBERG 94-NC-008 | \$120,000 01/04/94 \$375,000 | |
| FGMS FOR HIGH HEAT FLUX APPLICATIONS | Lannutti Ohio State University | N 36 01/11/93 \$402,833 | A WARD 94-NC-014 | | |
| LOW TEMPERATURE CHEMICAL ROUTES TO SYNTHESIS AND PROCESSING OF TITANIUM ALUMINIDE INTERMETALLICS | Kunta Prashant | N 08 03/11/93 \$45,052 | A WARD 94-NC-015 | | |
| CENTER FOR ENVIRONMENTAL MEDICINE | Goldblatt, M.D. Peter | N 36 03/11/93 \$1,000,000 | A HEDBERG 94-NC-017 | \$1,000,000 01/07/94 \$1,000,000 | |

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| | | | | |
| SYNPOSIUM Q ENTITLED "ELECTRICAL, OPTICAL, AND MAGNETIC PROPERTIES OF ORGANIC SOLID STATE MATERIALS Materials Research Society | Ballance, John | N 12 04/11/93 \$4,000 | LEE 94-MC-018 | |
| THIRD INTERNATIONAL CONFERENCE ON SOLID-TO-SOLID PHASE TRANSFORMATIONS IN INORGANIC MATERIALS '94 Univ of Virginia | J. House | N 12 05/11/93 \$5,100 | A WARD 94-MC-019 | \$5,100 01/06/94 |
| THE GORDON CONFERENCE ON MULTIPHOTON PROCESSES Gordon Research Conferences Inc | Compton, Robert | N 12 08/11/93 \$5,000 | D BERMAN 94-MC-020 | |
| EXAMINATION OF FORMATION MECHANISMS AND KINETICS IN A2+Y TITANIUM ALUMINIDE ALLOYS DURING ISOTHERMAL TRANSFORMATION Office of Naval Research | Spanos, George | N 12 10/11/93 \$5,000 | A WARD 94-MC-021 | \$5,000 01/01/94 |
| INVESTIGATION OF THE CHEMICAL FATE OF HAZARDOUS AEROSPACE MATERIALS IN THE ENVIRONMENT: A SUPRAMOLECULAR PHOTOCHEMICAL ... Columbia University | Nicholas, Turro | N 12 15/11/93 \$123,400 | A HEDBERG 94-MC-022 | \$123,400 01/04/94 |
| CERAMICS DERIVED FROM METALLIC PRECURSORS Univ of Arizona | Uhleinann, Donald | R 04 15/11/93 \$50,000 | A ERSTFIELD 94-MC-023 | \$50,000 01/05/94 |
| AASERT'94 SYNTHESIS AND CHARACTERIZATION OF NOVEL METAL COMPOUND CLUSTER MATERIALS Georgia Univ Research Foundation Inc | Duncan, Michael | N 36 15/11/93 \$110,170 | A BERMAN 94-MC-024 | \$110,170 01/07/94 |
| AASERT'94 THEORETICAL DYNAMICS STUDIES OF CHEMICAL REACTIONS IN SOLIDS Oklahoma State University | Thompson, Donald | N 36 15/11/93 \$157,086 | D BERMAN 94-MC-025 | \$157,086 01/07/94 |
| AASERT'94 GLOBAL OPTIMIZATION AND SENSITIVITY ANALYSIS IN MOLECULAR STRUCTURE Princeton University | Floudas, Christodoulos | N 36 15/11/93 \$149,731 | A BERMAN 94-MC-026 | \$149,731 01/07/94 |

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| QA8RT94 PHOTO-INITIATED ION-MOLECULAR REACTIONS IN SIZE-SELECTED CLUSTERS Univ of California: Berkeley | Neumark | Daniel | N 36 15/11/93 \$150,000 | A BERMAN 94-NC-027 | \$150,000 01/07/94 \$150,000 |
| QA8RT94 CHARGE FIELD INDUCED SPECTROSCOPY OF SOLID HYDROGEN Univ of Chicago | Oka | Takeshi | N 36 15/11/93 \$194,910 | A BERMAN 94-NC-028 | \$194,910 01/07/94 \$194,910 |
| QA8RT94 HIGH PERFORMANCE METAL FILMS: PREPARATION AND CHARACTERIZATION Univ of Cincinnati | Hubbard | Arthur | N 36 15/11/93 \$100,285 | D WILKES 94-NC-029 | |
| QA8RT94 CHEMISTRY INVOLVING THE PREPARATION, ISOLATION, AND IMMobilIZATION OF NANOCRYSTALLINE AND/OR MICROCRYSTALLINE BORON Duke University | Wells | Richard | N 36 15/11/93 \$139,000 | A ERSTFELD 94-NC-030 | \$134,795 01/07/94 \$138,000 |
| QA8RT94 NOVEL MATERIALS AND DEVICES FROM SELF-ASSEMBLED PERIODIC STRUCTURES Univ of Pittsburgh | Asher | Sanford | N 36 15/11/93 \$119,025 | A ERSTFELD 94-NC-031 | \$119,025 01/07/94 \$119,025 |
| QA8RT94 INORGANIC-ORGANIC MOLECULAR SONDING IN POROUS MATRICES Univ of Florida | Hench | Larry | N 36 15/11/93 \$86,600 | A ERSTFELD 94-NC-032 | \$87,982 01/08/94 \$88,600 |
| QA8RT94 MOLECULAR SIMULATIONS OF ULTRATHIN PERFLUOROPOLYETHER FILMS UNDER SHEAR Univ of Illinois | Grenick | Steve | N 36 15/11/93 \$145,545 | A ERSTFELD 94-NC-033 | \$145,545 01/08/94 \$145,545 |
| QA8RT94 FABRICATION OF FUNCTIONAL C-CERAMIC COMPOSITES - ZINC OXIDE Case Western Reserve University | Sukenik | Chais | N 36 17/11/93 \$222,355 | A HEDBERG 94-NC-034 | \$222,355 01/07/94 \$222,355 |
| QA8RT94 FLUORINATED PROPYLIDENE ARYL ETHERS University of Iupui | Shreeve | Jeanne | N 36 17/11/93 \$164,623 | D HEDBERG 94-NC-035 | |

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| | | N | 36 | A | | |
| AASERT94 PROCESSING AND CHARACTERIZATION KNOWLEDGE BASE FOR DEVICE-COMPATIBLE SECOND-ORDER NONLINEAR OPTICAL POLYMERS | George Wong | N | 36 | A | LEE \$102,053 17/11/93 \$104,435 | 6107/94 \$104,435 |
| AASERT94 DEVELOPMENT OF HUMAN RESOURCES THROUGH (ADVANCED) PROJECTS IN POLYMER SCIENCES AND TECHNOLOGY | Braja Mandal | N | 36 | D | LEE \$295,289 17/11/93 | 94-NC-037 |
| AASERT94 'NONLINEAR OPTICAL RESPONSE OF CONFINED EXCITONS IN MOLECULAR AND SEMICONDUCTOR NANOSTRUCTURES' | Mukamel | N | 36 | A | BERMAN \$145,443 17/11/93 \$298,925 | 6107/94 \$145,443 |
| AASERT94 ANISOTROPIC MORPHOLOGIES AND PROPERTIES OF PERMANENTLY ORIENTED (PERFLUORINATED MONOMER) / INORGANIC OXIDE NANOCOMPOSITES | Kenneth Mauritz | N | 36 | D | LEE \$218,005 17/11/93 | 94-NC-038 |
| AASERT94 THE MATERIALS SCIENCE AND MATHEMATICS OF BLOCK COPOLYMERS | Edwin James | N | 36 | A | LEE \$139,536 17/11/93 | 94-NC-039 |
| AASERT94 FUNCTIONALIZED HIGH-TEMPERATURE POLYMERS FOR IMPROVED BONDING IN ORGANIC-INORGANIC COMPOSITES | Mark Cincinnati | N | 36 | D | LEE \$125,186 17/11/93 | 94-NC-040 |
| AASERT94 ALL-OPTICAL POLYMER FIBER DEVICES | Mark Kuzyk | N | 36 | A | LEE \$125,215 17/11/93 | 94-NC-041 |
| AASERT94 MORE ORGANIC AND POLYMERIC SUPERCONDUCTORS | Washington University | N | 36 | D | LEE \$125,215 17/11/93 | 94-NC-042 |
| AASERT94 ZETA-ALUMINA FIBER-MATRIX INTERFACIAL COATINGS | University of Alabama Metzger | N | 36 | A | LEE \$231,135 17/11/93 | 94-NC-043 |
| AASERT94 Institute of Tech | George Jack | N | 36 | A | PECHNER \$273,606 17/11/93 \$273,606 | 94-NC-044 |

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| AASERT94 FOCUSED, FUNDAMENTAL STUDIES OF FRACTURE & WEAR IN COVALENTLY BONDED MATERIALS Univ of Florida | John Noholsky, Jr | N | 36 17/11/93 \$93,000 | D PECHENIK 94-NC-045 | |
| AASERT94 NOVEL TRACE ELEMENT ANALYSIS APPROACHES TO PREDICT IMPENDING FAILURE OF COMPOSITE BEARINGS Univ of Florida | James Winefordner | N | 36 17/11/93 \$150,000 | D PECHENIK 94-NC-046 | |
| AASERT94 A STUDY OF THE ENVIRONMENTAL DEGRADATION OF CERAMIC MATERIALS IN AEROSPACE STRUCTURES BY MEANS OF DYNAMIC ANALYSIS Univ of Florida | E Dow Whitney | N | 36 17/11/93 \$93,000 | D PECHENIK 94-NC-047 | |
| AASERT94 CREEP RESISTANCE OF GAMMA-TIAL MICROSTRUCTURES Carnegie-Mellon University | Pollock | N | 36 17/11/93 \$197,966 | A WARD 94-NC-048 | \$150,000 01/07/94 \$150,000 |
| AASERT94 ELECTRON MICROSCOPY AND HIGH TEMPERATURE FATIGUE STUDIES OF NIAl SINGLE CRYSTALS Stanford University | William Min | N | 36 17/11/93 \$153,550 | A WARD 94-NC-049 | \$150,000 01/07/94 \$150,000 |
| NON-HALOGENATED FIRE EXTINGUISHERS Univ of New Mexico | Robert Tapscott | N | 36 24/11/93 \$374,935 | A HEDBERG 94-NC-050 | \$269,956 08/04/94 \$374,935 |
| NEW TOOLS FOR MOLECULAR STRUCTURE DETERMINATION: GLOBAL OPTIMIZATION AND IDENTIFICATION OF CRITICAL VARIABLES Princeton University | Herschel Rabitz | N | 36 01/12/93 \$450,000 | A BERMAN 94-NC-052 | \$150,000 01/02/94 \$450,000 |
| THE POLYMER CHEMISTRY OF JUTARIENES AND THEIR POTENTIAL AS PRECURSORS OF NOVEL CONJUGATED POLYMERS Howard University | Steven Pollack | N | 36 09/12/93 \$275,618 | D HEDBERG 94-NC-055 | |
| CALIXARENE FUNCTIONALIZED POLYMERS FOR THE COMPLEXATION OF ACTINIDES AND HEAVY METALS Tulane University | Roundhill | N | 36 16/12/93 \$403,186 | D HEDBERG 94-NC-056 | |

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| THE POTENTIAL USE OF THE RHIZOSPHERE EFFECT TO ENHANCE LORMEDIATION OF SURFACE SOILS CONTAMINATED WITH STEX Tow State University | Joel | N 12 16/12/93 \$32,013 | D HEDBERG 94-NC-057 | |
| EQUIPMENT FOR IN-SITU STUDIES OF METAL ON III-V SEMICONDUCTORS Northeastern University | Laurence | N 12 15/12/93 \$15,038 | A ERSTFIELD 94-NC-058 | \$15,038 01/03/94 \$15,038 |
| WORKSHOP ON CROSS-DISCIPLINARY ISSUES IN THE DEVELOPMENT OF ADVANCED STRUCTURAL MATERIALS Office of Naval Research | Steven Fishman | N 12 16/12/93 \$12,500 | A WARD 94-NC-059 | \$12,500 23/05/94 \$12,500 |
| STATE RESOLVED DYNAMICS OF ION-MOLECULE PROCESSES Univ of Colorado | Stephen Leone | N 36 16/12/93 \$691,763 | BERNAN 94-NC-061 | |
| THEORETICAL AND EXPERIMENTAL STUDIES OF FEMTOSECOND PULSED LASER DEPOSITION AND MONSTATISTICAL DYNAMICS Oklahoma State University | Lionel Raff | N 36 23/12/93 \$434,205 | BERNAN 94-NC-062 | |
| THE SYNTHESIS AND PROCESSING OF INTERMETALLIC-BASED FUNCTIONALLY- GRADED MATERIALS Colorado School of Mines | John Moore | N 48 23/12/93 \$436,495 | WARD 94-NC-063 | |
| NINTH INTERDISCIPLINARY LASER SCIENCE CONFERENCE (ILS-X) | Nasser Peyghambarian | N 12 23/12/93 \$5,000 | D BERNAN 94-NC-064 | |
| NOVEL FABRICATION ROUTES TO GRAIN ORIENTED PIROELECTRIC CERAMICS General Atomics | Hal Streckert | N 36 23/12/93 \$426,347 | PECHENIK 94-NC-065 | |
| HIGH CONTRAST ORGANIC CRYSTAL OPTICAL MODULATOR FOR PHASED ARRAY ANTENNA AND OPTICAL SIGNAL PROCESSING SYSTEMS Jet Propulsion Laboratory | Lee Seth | N 12 23/12/93 \$130,200 | A LEE 94-NC-066 | \$126,146 01/10/93 \$129,254 |

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| | | TYPE/MONTHS RECEIVED AMOUNT | 23/12/93 | | |
| PHOTO DEPOSITION IN GLASSES Queens College | Gafney Harry | N 24 \$249,767 | A LEE | 94-NC-067 | 1130-648 01/94/94 0249-767 |
| THEORETICAL STUDIES OF GROUP IVA AND GROUP IVA CHEMISTRY Iowa State University | Gordon Mark | N 31/12/93 \$645,475 | BERMAN | 94-NC-068 | |
| POTENTIAL ENERGY SURFACES AND DYNAMICS FOR HIGH ENERGY SPECIES Iowa State University | Gordon Mark | N 31/12/93 \$251,180 | BERMAN | 94-NC-069 | |
| ORIENTATION SELECTIVE PROCESSING OF FUNCTIONAL CERAMICS Purdue Research Foundation | Souman Keith | N 31/12/93 \$616,493 | PECHENIK | 94-NC-070 | |

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| INVESTIGATION OF ATOMIC PHYSICS AND FREQUENCY STABILITY WITH A CRYOGENIC MICROCOIL LASER | Smithsonian Institution | Walmsworth | N 36 07/10/93 \$271,000 | A KELLEY 94-ME-001 | \$100,000 15/01/94 \$271,000 |
| (CASSERT) PLASMA IMMERSION ION IMPLANTATION PROCESS FOR SEMICONDUCTOR FABRICATION | Northwestern University | Chan | N 36 19/10/93 \$230,739 | A BARKER 94-ME-002 | \$237,035 30/12/93 \$230,739 |
| 1994 GORDON CONFERENCE ON POINT DEFECTS, LINE DEFECTS, AND INTERFACES IN SEMICONDUCTORS | Gordon Research Conferences Inc | Cruckshank | N 12 22/10/93 \$3,000 | PORRENTE | |
| HIGH TUNABLE MICROWAVE SOURCES | Cornell University | Nation | R 12 25/10/93 \$36,775 | A BARKER 94-ME-004 | \$36,775 01/02/94 \$36,775 |
| ION-MOLECULE CHEMISTRY RELATED TO PLASMA DEPOSITION AND ETCHING OF SILICON | Univ of Utah | Armstrong | N 61 26/10/93 \$201,597 | D KELLEY 94-ME-005 | |
| PHYSICS UTILIZING SPIN-POLARIZED GASES | Princeton University | Mapor | N 36 08/11/93 \$993,566 | A KELLEY 94-ME-007 | \$50,000 01/07/94 \$450,000 |
| ELECTRONIC TRANSPORT AND QUANTUM INTERFERENCE IN BALLISTIC NANOSTRUCTURES | Univ. of Illinois, Urbana-Champaign | Joel Yung | N 36 08/11/93 \$294,216 | D WITT 94-ME-008 | |
| DEVELOPMENT OF ADVANCED ELECTRONIC MATERIALS AND DEVICES FOR ULTRA-LOW I/F NOISE AND LOW LEAKAGE CURRENT APPLICATIONS | Univ of Missouri | Peter Hamed | N 48 09/11/93 \$335,303 | A WITT 94-ME-010 | \$43,207 01/06/94 \$162,525 |
| THE APPLICATION OF HIGH MAGNETIC FIELDS IN SEMICONDUCTOR PHYSICS | Massachusetts Institute of Technology | Heiman | N 66 15/11/93 \$17,900 | PORRENTE | |
| | | Don | | | 94-ME-011 |

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| (AASER94-058) RELIABILITY IMPROVEMENT IN HIGHLY PARALLEL ACCESS MEMORIES | University of Arizona | Neifeld | N 15/11/93 \$120,333 | N 36 | CRAIG | 94-ME-012 | 0126-019 01/06/94 0126-333 | |
| (AASER94-023) NEAR INFRARED-SENSITIVE OPTICALLY ADDRESSED SPATIAL LIGHT MODULATORS | University of Colorado | Moddel | N 15/11/93 \$100,627 | N 36 | CRAIG | 94-ME-013 | 0135-035 15/06/94 0135-035 | |
| (AASER94-045) HOLOGRAPHIC ASSOCIATIVE MEMORIES FOR DATABASE PROCESSING | Colorado State University | Niklas | N 15/11/93 \$135,025 | N 36 | CRAIG | 94-ME-014 | 0135-035 15/06/94 0135-035 | |
| (AASER94-002) COHERENT TRANSIENT SIGNAL PROCESSING | University of Washington | Abbitt | N 15/11/93 \$79,109 | N 36 | CRAIG | 94-ME-015 | 0135-035 15/06/94 0135-035 | |
| (AASER94-056) GaAs-GaInP SUPERLATTICE FOR INTRASUBBAND PHOTODETECTION | Northwestern University | Rizoghi | N 15/11/93 \$226,044 | N 36 | PORRENKE | 94-ME-016 | 0135-035 15/06/94 0135-035 | |
| (AASER94-157) COULOMB EFFECTS IN RESONANTLY COUPLED QUANTUM WAVEGUIDES | University of Notre Dame | Perot | N 15/11/93 \$139,998 | N 36 | PORRENKE | 94-ME-017 | 0135-035 15/06/94 0135-035 | |
| (AASER94-165) EPITAXIAL METALLIZATIONS FOR III-V SEMICONDUCTORS | University of Minnesota | Cohen | N 15/11/93 \$132,282 | N 36 | PORRENKE | 94-ME-018 | 0135-035 15/06/94 0135-035 | |
| (AASER94-025) IN ANI SR BASED III-V MICROSTRUCTURES WITH NOVEL ELECTRONIC PROPERTIES | California Institute of Technology | McGill | N 15/11/93 \$169,391 | N 36 | PORRENKE | 94-ME-019 | 0135-035 15/06/94 0135-035 | |
| (AASER94-111) STUDENT SUPPORT FOR MSE RESEARCH IN OPTOELECTRONICS | Colorado State University | Robinson | N 15/11/93 \$130,052 | N 36 | PORRENKE | 94-ME-020 | 0135-035 15/06/94 0135-035 | |

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| CAASERT94-063) ELECTRICAL PROPERTIES OF BLUE LASER DIODES Purdue University | Robert Gunshor | N 36 15/11/93 \$150,000 | A PONERKE 94-NE-021 | 0143,668 01/07/94 0143,668 | |
| CAASERT94-006) SHOOTING AND BOUNCING RAYS: PROPAGATION CHANNEL MODELING FOR WIRELESS COMMUNICATIONS Univ of Texas | Edward Powers | N 36 15/11/93 \$100,685 | D SMITH 94-NE-022 | 0143,668 01/07/94 0143,668 | |
| CAASERT94-054) JSEP AUGMENTATION PROPOSAL: VELOCITY OVERTHROW IN SILICON INVERSION LAYER Univ of California, Berkeley | Michael Lieberman | N 36 15/11/93 \$155,275 | A SMITH 94-NE-023 | 0143,668 01/07/94 0143,668 | |
| CAASERT94-136) HIGH-SPEED HETEROJUNCTION BIPOLAR TRANSISTOR MODEL AND CAD TOOL DEVELOPMENT Univ of Central Florida | Liou Jun | N 36 15/11/93 \$120,564 | WITT 94-NE-024 | | |
| CAASERT94-155) FABRICATION AND PROPERTIES OF HIGH-PERFORMANCE GRADED QUANTUM STRUCTURES Univ of California, Santa Barbara | Arthur Gossard | N 36 15/11/93 \$162,311 | A WITT 94-NE-025 | 0143,668 01/07/94 0143,668 | |
| CAASERT94-015) A STUDY OF IMPACT IONIZATION AND BREAKDOWN PHENOMENA IN SIGNAL DEVICES Univ of Michigan | Bhattacharya | N 36 15/11/93 \$156,626 | WITT 94-NE-026 | 0143,667 08/06/94 0143,667 | |
| CAASERT94-136) DEVELOPMENT OF ELECTRONIC DEVICES AND DEVICE PROCESSING TECHNOLOGY IN GMA-SIC AND B-SIC Univ Graduate Institute | Parsons | N 36 15/11/93 \$250,842 | WITT 94-NE-027 | | |
| CAASERT94-137) OPTICAL TARGET RECOGNITION Florida Institute of Technology | Kozaitis | N 12 16/11/93 \$117,347 | D CRAIG 94-NE-028 | | |
| CAASERT94-041) SLITTED HIGH-HARMONIC PENNITRON OSCILLATOR Univ of California, Davis | Luhmann, Jr. | N 36 16/11/93 \$149,878 | A BARKER 94-NE-029 | 0143,678 20/06/94 0143,678 | |

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| | | TYPE | MONTHS | AMOUNT | | | |
| (AASERT94-024) ULTRA-WIDE AND MILLIMETER-WAVE PHOTOCATHODE FREE-ELECTRON LASER UNIV OF CALIFORNIA, DAVIS Univ of California, Davis | Lubenne, Jr. | N | 36 | 0 16/11/93 \$149,878 | B BARKER 94-NE-030 | | |
| (AASERT94-169) ELECTRICAL AND THERMAL STABILITY OF ULTRA SHARP SILICON FIELD EMISSIONS Pennsylvania State University | Cutler | N | 36 | 0 16/11/93 \$110,567 | B BARKER 94-NE-031 | | |
| (AASERT 91-077) LABORATORY INVESTIGATION OF DIFFUSE PLASMA MODES Massachusetts Institute of Technology | Lee | N | 36 | 0 16/11/93 \$250,864 | B BARKER 94-NE-032 | | |
| (AASERT 91-123) ADVANCEMENT OF MINORITY STUDENTS IN PLASMA SCIENCE Knoxville College | Rader | N | 36 | 0 16/11/93 \$245,472 | B BARKER 94-NE-033 | | |
| (AASERT 94-113) HIGH POWER MICROWAVES Texas Tech University | Kristiansen | N | 36 | 0 16/11/93 \$144,168 | B BARKER 94-NE-034 | | |
| (AASERT 94-075) OBJECT ORIENTED FORMULATIONS FOR PARTICLE-IN-CELL CPIC) SIMULATIONS Univ of California, Berkeley | Girdsall | N | 36 | 0 16/11/93 \$147,767 | A BARKER 94-NE-035 | | |
| (AASERT 94-060) INVESTIGATION OF A GLOW DISCHARGE PLASMA OPERATING AT ONE ATMOSPHERE Univ of Tennessee | Roth | N | 36 | 0 16/11/93 \$141,941 | B BARKER 94-NE-036 | | |
| (AASERT 94-036) COHERENT PHONON MODULATION OF THE ELECTRONIC PROPERTIES OF NARROW-JAP MATERIALS Massachusetts Institute of Technology | Ippe | N | 36 | 0 16/11/93 \$147,937 | A BARKER 94-NE-037 | | |
| (AASERT 94-166) SCANNING TUNNELING MICROSCOPY OF IN-SITU CHARACTERIZED NOVEL MATERIALS Univ of Arizona | Sarid | N | 36 | 0 16/11/93 \$244,967 | D BARKER 94-NE-038 | | |

| TYPE/MONTHS RECEIVED | STATUS PROPOSAL # | PROGRAM MANAGER | INVESTIGATOR | TITLE (CONT.) | INSTITUTION | INITIATE START DATE TOT ANT |
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| N 36 16/11/93 \$100,168 | D SCHLOSSER 94-HE-039 | | Knitrova Galina | CAASERT 94-006) ELECTRON AND NONLINEAR OPTICS IN SEMICONDUCTORS | Univ of Arizona | |
| N 36 16/11/93 \$120,048 | D SCHLOSSER 94-HE-040 | | Steven | CAASERT 94-103) MEASUREMENT OF THE LINEWIDTH ENHANCEMENT FACTOR AT HIGH EXCITATION LEVELS | Univ of New Mexico | |
| N 36 16/11/93 \$130,049 | D SCHLOSSER 94-HE-041 | | Richard | CAASERT 94-010) ADVANCED INTEGRATED OPTICAL DEVICE SIMULATION: A mp256* PROGRAM FOR OPTICAL DEVICES | Brueck | |
| N 36 16/11/93 \$130,082 | D SCHLOSSER 94-HE-042 | | Gary | CAASERT 94-062) VISIBLE LASERS IN FIGERS AND WAVEGUIDES: NEW X-RAY GENERATING TARGETS | Eden | |
| N 36 16/11/93 \$175,071 | D SCHLOSSER 94-HE-043 | | Reinhard | CAASERT 94-064) EFFICIENT NEAR AND MID-INFRARED DIELECTRIC WAVEGUIDE LASERS | Osgood, Jr | |
| N 36 16/11/93 \$143,567 | D SCHLOSSER 94-HE-044 | | Martin | CAASERT 94-173) X-RAY MICROSCOPY OF SICLOGICAL SAMPLES WITH LASER PLASMA | Likharev | |
| N 36 16/11/93 \$115,314 | D SCHLOSSER 94-HE-045 | | Konstantin | CAASERT 94-026) COMPUTER MODELLING AND SIMULATION OF SINGLE-ELECTRON DEVICES | State University of New York | |
| N 36 16/11/93 \$95,227 | D WEINSTOCK 94-HE-046 | | Douglas | CAASERT 94-034) PARALLEL NANOSTRUCTURING OF ELECTRONIC SOLIDS | Univ of Colorado | |
| N 36 16/11/93 \$149,524 | D WEINSTOCK 94-HE-047 | | Theresa | CAASERT 94-159) Vortex dynamics in lightly-doped films of high Tc superconductors | Univ of Colorado | |
| N 36 16/11/93 \$149,524 | A WEINSTOCK 94-HE-048 | | | CAASERT 94-007) Vortex dynamics in lightly-doped films of high Tc superconductors | Univ of Colorado | |

| TITLE TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED | | STATUS PROPOSAL # | INITIATE START DATE YR AMT |
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| | | AMOUNT | 16/11/93 | | |
| CAASERT 94-147) MODIFICATION OF HIGH TC SUPERCONDUCTORS BY ION IMPLANTATION | Theodore Geballe | N | 36 \$149,224 | A WEINSTOCK 94-NE-046 | 16/06/94 \$149,225 |
| CAASERT 94-133) SQUID MEASUREMENTS AND MODELING FOR AIRCRAFT MODE | John Mikswo | N | 36 \$149,451 | A WEINSTOCK 94-NE-049 | 16/06/94 \$149,451 |
| CAASERT 94-071) STUDENT TRAINING IN HIGH-TEMPERATURE SUPERCONDUCTING ELECTRONICS | Roman Sobolewski | N | 36 \$125,300 | 0 WEINSTOCK 94-NE-050 | 16/11/93 \$125,300 |
| CAASERT 94-061) HIGH TEMPERATURE SUPERCONDUCTING COMPOUNDS AASERT PROGRAM | Allen Goldman | N | 36 \$148,980 | 0 WEINSTOCK 94-NE-051 | 16/11/93 \$148,980 |
| CAASERT 94-121) AASERT TRAINING AND RESEARCH IN STM METHODS FOR FABRICATION OF MESOSCALE CUPRATE SUPERCONDUCTOR ELECTRON DEVICES | Ed Wolf | N | 36 \$175,071 | 0 WEINSTOCK 94-NE-052 | 16/11/93 \$175,071 |
| CAASERT 94-174) SPECTROSCOPY OF RARE EARTH-DOPED III-V MATERIALS AND STRUCTURES | Gary Eden | N | 36 \$150,000 | 0 PORRENTE 94-NE-053 | 16/11/93 \$150,000 |
| CAASERT 94-038) DEPOSITION OF GALLIUM NITRIDE EPILAYERS BY OMVPE | Karole Skoorski | N | 36 \$103,222 | A PORRENTE 94-NE-054 | 15/07/94 \$103,222 |
| CAASERT 94-052) MEASUREMENT OF HETEROGENEOUS DEACTIVATION OF VIBRATIONALLY-EXCITED HOMONUCLEAR MOLECULES AT SOLID SURFACES | Perry Yaney | N | 36 \$118,514 | A KELLEY 94-NE-055 | 22/11/93 \$118,514 |
| CAASERT 94-142) DESIGN OF OPERATIONAL TRANSCONDUCTANCE AMPLIFIERS USING HBT DEVICES FOR MICROWAVE ACTIVE FILTER APPLICATIONS | Hokari | N | 36 \$90,591 | D WITT 94-NE-056 | 22/11/93 \$90,591 |

| TITLE TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE FOR ANT |
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| CAASERT 94-064) SLOTTED HIGH-HARMONIC GYROKLYSTRON AMPLIFIER Univ of California, Davis | Luhmann, Jr | N 36 22/11/93 \$149,070 | B BARKER 94-ME-057 | |
| CAASERT 94-101) THE EFFECTS OF A NEW CLASS OF OXIDE TRAPPING CENTERS ON THE PERFORMANCE DEGRADATION OF MOS TECHNOLOGIES Univ of Arizona | Galloway Kenneth | N 36 22/11/93 \$129,085 | O PONRENKE 94-ME-058 | |
| CAASERT 94-100) SYNTHESIS AND EVALUATION OF NOVEL DIFFUSION CARRIERS IN CVU Cu METALLIZATION Arizona State University | Kouvetakis John | N 36 22/11/93 \$161,676 | O PONRENKE 94-ME-059 | |
| CAASERT 94-097) DEVELOPMENT OF MOVING DISK ND:YAG AND ND:SSG LASERS PUMPED BY PULSED DIODE LASERS Howard University | Kushasaha Vikram | N 36 23/11/93 \$123,675 | O SCHLOSSER 94-ME-060 | |
| CAASERT 94-083) MEASUREMENT OF MICRO-MIRROR SURFACE DEFORMATION Univ of Dayton | Gustafson Steven | N 36 23/11/93 \$104,752 | O SCHLOSSER 94-ME-061 | |
| CAASERT 94-102) VERTICAL CAVITY SURFACE EMITTING LASERS Cornell University | Schaeff William | N 36 23/11/93 \$375,681 | O SCHLOSSER 94-ME-062 | |
| CAASERT 94-152) OPTICAL UP-CONVERTER FOR PHASED ARRAYS USING MARRON HAND, TUNABLE OPTICAL MODULATION AT MILLIMETER WAVE FREQUENCIES Univ of California, Berkeley | Lau Kam | N 36 23/11/93 \$200,712 | O SCHLOSSER 94-ME-063 | |
| CAASERT 94-103) OPTICAL DEVICES BASED ON ADVANCED ORGANIC POLYMERS Washington University | Krchnavek Robert | N 36 23/11/93 \$126,532 | O CRAIG 94-ME-064 | |
| CAASERT 94-082) DESIGN, FABRICATION, AND TEST OF PLZT ELECTRO OPTICAL PROGRAMMABLE GRATINGS/PRISMS FOR OPTICAL INTERCONNECTION Syracuse University | Song | N 36 23/11/93 \$104,179 | O CRAIG 94-ME-065 | |

| TITLE TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT ANT |
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| | | | | |
| (AASERT 94-099) ADAPTIVE PHASED ARRAY RADAR SIGNAL PROCESSING USING PHOTOREFRACTIVE VOLUME HOLOGRAMS Univ of Colorado | Wagner | Kelvin | CRAIG 94-NE-066 | W 23/11/93 \$156,091 |
| (AASERT 94-119) TECHNOLOGICAL DEVELOPMENT FOR INTERFACING PARALLEL ACCESS MEMORIES TO PARALLEL COMPUTERS Univ of California, San Diego | Esener | Sadik | CRAIG 94-NE-067 | W 23/11/93 \$190,359 |
| (AASERT 94-073) ELECTRONIC PROPERTIES OF GaAs FILMS GROWN ON SILICON WITH INSE Buffer LAYERS Washington State University | Olsen | Larry | POMRENKE 94-NE-068 | W 23/11/93 \$86,054 |
| ORGANIZATION OF A SECOND WORKSHOP ON WIDE BANDGAP NITRIDES | | | WITT 94-NE-069 | W 24/11/93 \$4,000 |
| QUANTUM NOISE IN OPTICAL NETWORK Univ of Illinois | Markoc | Hadis | CRAIG 94-NE-071 | W 24/11/93 \$1,03,94 |
| OPTICAL FREQUENCY STANDARDS, DIODE LASERS, AND PRECISION MEASUREMENT Univ of Colorado | Saleh | Gahaa | CRAIG 94-NE-072 | W 24/11/93 \$303,000 |
| FAST-STEAM STUDIES OF THE ELECTRON-IMPACT IONIZATION OF NEUTRAL AND IONIC FREE RADICALS AND MOLECULES City University of New York | Hollberg | Lee | KELLEY 94-NE-073 | W 24/11/93 \$271,000 |
| (AASERT 94-131) ATOMIC BEAM COOLING WITH LASER RADIATION Florida International University | Hardy | Kenneth | KELLEY 94-NE-074 | W 01/12/93 \$145,000 |
| (AASERT 94-176) FIBER OPTIC SENSORS FOR SMART METALLIC STRUCTURES Virginia Polytechnic Inst & State Univ | Murphy | Kent | SCHLOSSBER 94-NE-075 | W 01/12/93 \$142,700 |

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| | | | | | | RECEIVED | PROGRAM MANAGER |
| CAASERT 94-19C) ADVANCED 34-CHIP INTERCONNECTS: CU ON SIGEC/SI | | | | N 36 | A | 01/12/93 | WITT |
| Arizona State University | Mayer | James | | \$174,425 | | \$130,000 | 30/06/94 |
| (CJSEP) RESEARCH IN ELECTRONICS | | | | N 36 | A | 06/12/93 | SMITH |
| Univ of Southern California | Steier | William | | \$2,937,975 | | \$2,682,234 | 32/04/94 |
| FUNDAMENTAL STUDIES OF GaAs SURFACE PASSIVATION FOR IMPROVED | | | | N 36 | D | 06/12/93 | PONRNEKE |
| SEMICONDUCTOR MANUFACTURING | Weinberg | | | \$375,177 | | | 94-NE-079 |
| Univ of California, Santa Barbara | | | | N 36 | D | 06/12/93 | WITT |
| HOT CARRIER THERMOMETRY IN HETEROSTRUCTURES AND HETEROVICES | | | | \$461,613 | | \$109,959 | 94-NE-080 |
| Univ of Maryland | Belenky | Gregory | | N 36 | A | 06/12/93 | CRAIG |
| OPTOELECTRONIC DEVICES BASED ON NOVEL SEMICONDUCTOR STRUCTURES | | | | \$109,959 | | \$109,959 | 94-NE-081 |
| Bowling Green University | Ding | Yujie | | N 36 | A | 06/12/93 | CRAIG |
| MATERIALS ENGINEERING NOVEL SEMICONDUCTOR STRUCTURES | | | | \$388,146 | | \$388,146 | 94-NE-082 |
| Johns Hopkins University | Khurgin | Jacob | | N 36 | A | 09/12/93 | CRAIG |
| DIFFRACTIVE MODULATORS AND INTERFEROMETRIC RECEIVERS FOR ULTRA-HIGH SPEED OPTICAL COMMUNICATIONS | Brady | David | | \$532,206 | | \$532,206 | 94-NE-083 |
| Univ of Illinois | | | | N 36 | A | 14/12/93 | SCHLOSSBER |
| OPTICAL, ELECTRONICS AND OPTOELECTRONIC MATERIALS AND DEVICES | | | | \$570,000 | | \$570,000 | 94-NE-084 |
| SEARCH California Institute of Technology | Varaviv | Aaron | | N 36 | A | 14/12/93 | SCHLOSSBER |
| ORGANIZATION OF THE 1994 PHOTONICS SCIENCE TOPICAL MEETINGS | | | | \$80,000 | | \$80,000 | 94-NE-085 |
| Optical Society of America | Hennage | David | | N 12 | A | 17/12/93 | SCHLOSSBER |
| | | | | \$80,000 | | \$80,000 | |

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| TITLE TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT |
|--|--------------------|-----------------------------------|---|------------------------------------|
| A SYSTEM DYNAMICS MODEL OF THE MAGNETOSPHERE FOR SPECIFYING AND FOR-CASTING SELECTED MAGNETOSPHERIC PARAMETERS Siscoe Boston University | George | N 12 24/11/93 \$153,720 | A HART 94-MI-001 | \$140,910 06/11/93 \$140,910 |
| NONLINEAR OPTICS OF METAL COATED QUANTUM DOTS | | | | |
| Rensselaer Polytechnic Institute | Birnboim | N 12 24/11/93 \$52,290 | A HART 94-MI-002 | \$39,217 01/01/94 \$39,217 |
| A RESEARCH TRANSFER EFFORT IN EM RADIATION ANALYSIS BETWEEN ARNSTA ONG LABORATORY & VIRGINIA STATE UNIVERSITY Virginia Polytechnic Inst & State Univ | Agarwal Krishan | N 12 13/12/93 \$82,699 | A HART 94-MI-003 | \$65,493 04/02/01 \$65,493 |
| MOLECULAR ORBITAL CALCULATIONS OF ELECTRONIC PROPERTIES AND STABI LITY OF MO AND RELATED MATERIALS | Connolly John | N 12 16/12/93 \$85,375 | A HART 94-MI-004 | \$64,935 01/01/94 \$64,935 |

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|---|--------------------|-----------------------------------|---|-----------------------------------|
| PERCEPTUAL IMMIGRATION OF EXPECTED INPUTS Univ of Utah | Johnston William | R 09 05/10/93 1734.007 | TANCHEY | 94-NL-001 |
| ARGUMENT EVALUATION AND PROBABILITY JUDGMENT Univ of Michigan | Smith Edward | R 36 12/10/93 \$350.150 | TANCHEY | 94-NL-004 |
| MODELING EARLY DENDRITIC INTEGRATION IN THE EYE OF THE FLY Univ of New Mexico | Donohoe Gregory | N 48 12/10/93 \$645.457 | TANCHEY | 94-NL-005 |
| DECISION PROCESSES IN RECOGNITION MEMORY Univ of North Carolina | Harshman Elliot | N 36 12/10/93 \$176.658 | TANCHEY | 94-NL-006 |
| INTERACTION OF LIGHT AND CLOCK REGULATION IN NEUROSPORA Dartmouth College | Lores Jennifer | N 36 14/10/93 \$1923.006 | HADDAD | 94-NL-008 |
| A GENETIC APPROACH TO MAMMALIAN CIRCADIAN RHYTHMS Univ of Pennsylvania | Bucan Noje | N 36 14/10/93 \$1,069.402 | HADDAD | 94-NL-009 |
| BEHAVIORAL RESETTING OF CIRCADIANCLOCKS Univ of Toronto | Mrosovsky Nicholas | N 36 15/10/93 \$254.502 | HADDAD | 94-NL-011 |
| PHASE SHIFTING EFFECTS OF LIGHT AND ACTIVITY ON THE HUMAN CIRCADIA Univ of Chicago | Van Cauter Eve | R 36 18/10/93 \$570.630 | HADDAD | 94-NL-014 |
| CHANGES IN SENSORY RESPONSIVENESS DURING CONTROLLED WAIST MOVEMENTS MADE BY BEHAVING MONKEYS AND HUMAN SUBJECTS Univ of Tennessee | Nelson Randall | R 36 01/11/93 \$357.265 | HADDAD | 94-NL-017 |

| TITLE TITLE (CONT.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED | STATUS PROPOSAL # | INITIATE START DATE | TOT AMT |
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| | | | | | |
| NONLINEAR NEARFIELD WAVE PROPAGATION IN AN ENDOCHROMIC SOLID | Day | N 36 08/11/93 \$125,000 | A DICKINSON 94-NL-018 | 8/16/93 15/03/94 \$125,000 | |
| VIEW-BASED STRATEGIES FOR FORM & MOTION FUSION IN OBJECT RECOGNITION | Steven Allen | N 12 16/11/93 \$94,835 | A TAMNEY 94-NL-019 | 8/16/93 01/10/94 \$94,835 | |
| UN & ROBOTIC EXPLORATION | Maxman | | | | |
| Massachusetts Institute of Technology | | | | | |
| GRAVITY WAVES AND CONVECTION IN THE ATMOSPHERE | | | | | |
| NASA - Goddard Space Flight Center | Einaudi | R 24 17/11/93 \$124,450 | A KROLL 94-NL-020 | 8/16/93 01/10/94 \$124,450 | |
| TURNOVER OF THE STRESS INDUCED PROTEIN, HSP70. | Peterson | R 24 17/11/93 \$205,860 | A KOZUMO 94-NL-021 | 8/16/93 01/07/94 \$205,860 | |
| MECHANISM(S) OF MOLECULAR RESPONSES IN MAMMALIAN CELLS EXPOSED TO PHYSICAL AGENTS (ALONE AND IN COMBINATION) | Meltz | R 36 10/11/93 \$199,168 | A KOZUMO 94-NL-022 | 8/17/93 01/07/94 \$199,168 | |
| PREDICTION AND ASSESSMENT OF DERMAL EXPOSURE | | | | | |
| Univ of California, San Francisco | Guy Richard | N 36 10/11/93 \$536,404 | A KOZUMO 94-NL-023 | 8/17/93 01/07/94 \$536,404 | |
| ASSERT-94: UPPERMOST MANTLE STRUCTURE IN THE MIDDLE EAST, CENTRAL ASIA, LAKE BAIKAL, & FAR EAST FROM PW TOMOGRAPHY & SN ATTENUATION | Hearn | N 36 10/11/93 \$19,653 | A DICKINSON 94-NL-024 | 8/16/93 01/07/94 \$19,653 | |
| ASSERT-94: THE APPLICATION OF BROADBAND ARRAYS AND NETWORKS TO SEISMIC MONITORING OF UNCALIBRATED REGIONS | Owens | N 36 10/11/93 \$75,428 | A DICKINSON 94-NL-025 | 8/16/93 01/07/94 \$75,428 | |
| ASSERT-94: A NON-LINEAR FRACTURE MECHANICS MODEL FOR SPALLATION AND COUPLING OF NUCLEAR EXPLOSIONS DETONATED IN HARD ROCK | Charles Sembis | N 36 10/11/93 \$94,668 | A DICKINSON 94-NL-026 | 8/16/93 01/07/94 \$94,668 | |

| TITLE | TITLE (CONT.) | INVESTIGATOR | TYPE/AGREEMENTS | STATUS | INITIATE START DATE TOT AMT | | |
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| AASERT-94 ANALYSIS OF SOVIET DSS RECORDS FOR PROPAGATION AND MODELING OF LG BLOCKAGE ACROSS MAJOR CRUSTAL FEATURES | Univ of Wyoming | James Schatzman | N 36 19/11/93 \$119,864 | A DICKINSON 94-NL-027 | \$119,864 01/07/94 \$119,864 | | |
| AASERT-94 HYDROACOUSTIC ARRAYS FOR SEISMIC DETECTION, LOCATION, AND DISCRIMINATION: A COMPARISON WITH LAND-BASED SEISMIC ARRAYS | Univ of California, San Diego | John Orcutt | N 36 19/11/93 \$83,194 | A DICKINSON 94-NL-028 | \$83,194 01/07/94 \$83,194 | | |
| AASERT-94 SIGNAL ENHANCEMENT OF SEISMIC ARRAY DATA: APPLICATION TO LONG-PERIOD SURFACE WAVES & HIGH FREQUENCY WAVEFIELDS | Univ of California, San Diego | Vernon Frank | N 36 19/11/93 \$92,244 | A DICKINSON 94-NL-029 | \$92,244 01/07/94 \$92,244 | | |
| AASERT-94 CHARACTERIZATION OF SEISMIC SOURCES USING EMPIRICAL CREEPS FUNCTIONS | Massachusetts Institute of Technology | N. Nafsi | N 36 19/11/93 \$160,860 | A DICKINSON 94-NL-030 | \$135,283 01/07/94 \$140,860 | | |
| AERODOLIC AND CIRCADIAN MODULATION OF HUMAN VISION | Syracuse University | Barlow Robert | N 36 22/11/93 \$292,326 | D TANGNEY 94-NL-031 | | | |
| AASERT-94 AUGMENTATION AWARD FOR TRAINING IN AVIATION HUMAN FACTOR | Endsley | Nica | N 24 23/11/93 \$85,331 | A COLLINS 94-NL-032 | \$85,331 01/07/94 \$85,331 | | |
| AASERT-94 INFLUENCE OF MULTISENSORY STIMULATION IN OLULAR MOTOR PERFORMANCE | Univ of Pittsburgh | Joseph Furman | N 36 23/11/93 \$349,360 | A COLLINS 94-NL-033 | | | |
| AASERT-94 EFFECTS OF SEROTONergic COMPOUNDS ON STRESS-INDUCED BEHAVIOR IN RATS | Louisiana State Univ--School of Medicine | Adrian Dunn | N 36 29/11/93 \$121,239 | A HADDAD 94-NL-034 | \$121,239 01/07/94 \$121,239 | | |
| AASERT-94 MICROBIAL TOXICITY OF NON-UNIFORM MIXTURES OF KENOBIOOTIC CHEMICALS | Yale Mexico State University | Nirmal Khandan | N 36 29/11/93 \$140,270 | A KOLUMBO 94-NL-035 | \$140,270 01/07/94 \$140,270 | | |

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| | | N | 36 29/11/93 \$131,269 | | | |
| AASSERT-94 OCTANOL-WATER PARTITION COEFFICIENTS BY CAPILLARY ELECTR OPHORESIS Univ of Cincinnati | Dorsay | N | 36 29/11/93 \$170,000 | A KOZYRAO 94-ML-036 | \$139,696 01/07/94 \$131,269 | |
| AASSERT-94 ASSESSMENT OF SURFACTANT-ENHANCED BIOREMEDITION OF SOIL > CONTAINING STRONGLY SORBING Princeton University | Jaffe | N | 36 29/11/93 \$170,000 | A KOZYRAO 94-ML-037 | \$177,811 01/07/94 \$170,000 | |
| AASSERT-94 ARGUMENTATION FOR HIGH-ENERGY ELECTRON BEAM-INDUCED IONO SPHERIC MODIFICATION EXPERIMENT Univ of Michigan | Neubert | N | 36 29/11/93 \$170,499 | A KROLL 94-ML-038 | \$78,168 01/07/94 \$78,499 | |
| AASSERT-94 GROUND CONNECTIVITY EFFECTS IN WIDEBAND ELECTRIC FIELDS RECORDED AT MULTIPLE STATIONS Univ of Florida | Thessman | N | 36 29/11/93 \$61,932 | A KROLL 94-ML-039 | \$61,932 01/07/94 \$61,932 | |
| AASSERT-94 CONTROLLED EXPERIMENTS ON DUCTED WHISTLEERS Lee | Min-Chang | N | 36 29/11/93 \$274,095 | A KROLL 94-ML-040 | \$274,723 01/07/94 \$274,095 | |
| SELF-CONSTRUCTION AND CO-CONSTRUCTION OF EXPLANATIONS DURING TUTOR ING Univ of Pittsburgh | Chi | N | 30 30/11/93 \$242,260 | D TANGNEY 94-ML-041 | | |
| SPACE-VARIANT ACTIVE VISION: SEGMENTATION, ATTENTION AND CONTROL teston University | Schaeartz | Eric | N | 36 30/11/93 \$536,616 | TANGNEY 94-ML-042 | |
| AASSERT-94 MAGNETIC ACTIVITY IN ALGOL BINARIES Univ of Virginia | Richards | Mercedes | N | 36 30/11/93 \$139,870 | A RADOSKI 94-ML-043 | \$139,870 01/07/94 \$139,870 |
| AASSERT-94 DETERMINING THE MAGNETIC ENVIRONMENT IN WHICH SOLAR ACTI VITY OCCURS Stanford University | Sturrock | Peter | N | 36 01/12/93 \$149,047 | A RADOSKI 94-ML-044 | \$144,261 01/07/94 \$149,047 |

| TITLE TITLE (CONTR.) INSTITUTION | INVESTIGATOR | TYPE/MONTHS RECEIVED AMOUNT | STATUS PROGRAM MANAGER PROPOSAL # | INITIATE START DATE TOT AMT | |
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| AASERT-94 AUGMENTATION OF A GRANT ON WORKING MEMORY Univ of South Carolina | Engle Rendall | N 24 01/12/93 \$102,524 | A TANGNEY 94-ML-045 | \$102,512 01/07/94 \$102,524 | |
| AASERT-94 EARLY SCENE ANALYSIS Harvard University | Carvagh Patrick | N 36 01/12/93 \$165,371 | A TANGNEY 94-ML-046 | \$165,371 01/07/94 \$165,371 | |
| AASERT-94 ANALYSIS OF DIGITAL TELESEISMIC ARRAY DATA COLLECTED IN SOUTH CENTRAL CHINA AND NORTHERN MONGOLIA Univ of California, Los Angeles | Davis Paul | N 36 01/12/93 \$127,393 | A DICKINSON 94-ML-047 | \$127,393 01/07/94 \$127,393 | |
| VISUAL MOTION PERCEPTION AND VISUAL INFORMATION PROCESSING Univ of California, Irvine | Sperling George | R 60 01/12/93 \$1,244,624 | A TANGNEY 94-ML-048 | \$186,170 01/07/94 \$662,063 | |
| AASERT-94 PROPOSAL FOR A HYPERSPECTRAL SKY SURVEY Florida Institute of Technology | Ritter Bruce | N 36 01/12/93 \$121,301 | A RADOSKI 94-ML-050 | | |
| CIRCADIAN RHYTHMS IN ZEBRAFISH Univ of Kansas | Carilli Gregory | N 24 16/12/93 \$190,527 | A HADDAD 94-ML-053 | \$92,671 01/07/94 \$92,646 | |
| SOCIETY FOR RESEARCH ON BIOLOGICAL RHYTHMS AND SYMPOSIUM Univ of Virginia | Moore Robert | N 12 22/12/93 \$10,000 | A HADDAD 94-ML-054 | \$10,000 01/06/94 \$10,000 | |
| PHYSIOLOGY, BIOCHEMISTRY, AND GENETICS OF A PURE CULTURE OF AN OAL STRAFFELI BACTERIUM THAT UTILIZES 2,4,6-TRIMETHYLOLUEME... University of Ljubljana | Crnford Ronald | R 36 22/12/93 \$481,701 | A KOLUMBO 94-ML-055 | \$181,725 01/07/94 \$481,701 | |
| DEVELOPMENT OF A QUANTITATIVE MODEL FOR PREDICTION OF PERCUTANEOUS ASSORPTION North Carolina State University | Willises Patrick | N 36 22/12/93 \$448,036 | A KOLUMBO 94-ML-056 | \$75,000 01/08/94 \$448,036 | |

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| IDENTIFICATION AND STUDY OF THE RETINAL GANGLION CELL BASIS OF CIR CAUTIAN RHYTHMS UNIV OF ALABAMA | Franklin Author | N 36 27/12/93 \$283,699 | HADDAD 94-ML-057 | |
| DIFFUSIBLE DRIVING AND COUPLING SIGNALS OF THE BIOLOGICAL CLOCK JARRELD COLLEGE OF COLUMBIA UNIVERSITY | Silver Rae | A 12 27/12/93 \$80,000 01/04/94 \$80,000 | HADDAD 94-ML-058 | |

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| WAVELETS, SIGNAL PROCESSING, & MATRIX COMPUTATION | | | N 06/10/93 | 12 \$18,640 | A 94-MR-001 |
| Air Force Institute of Technology | Suter | Bruce | | | |
| THEORETICAL INVESTIGATION OF CHAOTIC DYNAMICS | | | N 26/10/93 | 36 \$164,015 | A 94-MR-002 |
| Univ of Maryland | Yorke | James | | | |
| SIGNAL PROCESSING AND DETECTION | | | N 29/10/93 | 12 \$30,000 | A 94-MR-003 |
| Air Force Institute of Technology | Suter | Bruce | | | |
| SINGLE WAFER PLASMA REACTOR SIMULATOR | | | N 01/11/93 | 36 \$81,526 | A 94-MR-005 |
| Arizona State University | Cle | Timothy | | | |
| MODELING AND CONTROL OF NONLINEAR SYSTEMS | | | N 01/11/93 | 12 \$50,000 | A 94-MR-006 |
| Univ of Colorado | Hauser | John | | | |
| CHAOTIC SIGNAL PROCESSING: MONITORING & IDENTIFICATION OF CHAOTIC SIGNALS | | | N 01/11/93 | 12 \$80,000 | A 94-MR-007 |
| Northwest Research Associates, Inc. | Wright | Jon | | | |
| MODELING OF INP CRYSTAL GROWTH BY THE MLEK PROCESS | | | N 01/11/93 | 24 \$100,000 | A 94-MR-009 |
| Cambridge Hydrodynamics Incorporated | Orzaz | Steven | | | |
| APPLICATION OF GEOMETRICAL ANHOLONOMY TO THE GLOBAL POSITIONING SYSTEM & TO THE TECHNOLOGY OF WORLD-WIDE SYNCHRONIZATION | | | N 01/11/93 | 12 \$69,073 | A 94-MR-010 |
| Michigan State University | Treli | Serguei | | | |
| HANKEL OPERATORS IN CONTROL THEORY | | | N 10/11/93 | 36 \$216,246 | D 94-MR-011 |

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| | | AMOUNT | PROPOSAL # | | | |
| PERFECT SINYARY ARRAYS: VARIATIONS AND RELATED MATTERS Wright State University | K. Arasu | N 36 10/11/93 \$115,979 | 0 | SJOCREN 94-NN-013 | | |
| (AASERT94) ULTRA-WIDEBAND ELECTROMAGNETICS Polytechnic University | Carin Lawrence | N 36 16/11/93 \$242,267 | A | MACHAN 94-NN-015 | | |
| (AASERT94) PARAMETER ESTIMATION TOPICS IN ARRAY PROCESSING George Mason University | Van Trees | N 36 16/11/93 \$214,841 | 0 | SJOCREN 94-NN-016 | | |
| (AASERT94) SELF-IMPROVING METHODS FOR MATERIALS AND PROCESS DESIGN Wright State University | Chen C. Phillips | N 36 16/11/93 \$110,334 | A | CLASSMAN 94-NN-017 | | |
| (AASERT94) COMPLETE POINTS DIAGNOSTICS FOR MULTIVARIATE ANALYSIS Univ of Kentucky | Stromberg Arnold | N 36 16/11/93 \$53,795 | 0 | SJOCREN 94-NN-018 | | |
| (AASERT94) RESEARCH ON ALGORITHMS IN A DISTRIBUTED ENVIRONMENT W/ CONCENTRATION ON DISTRIBUTED SIMULATION AND VISION Queens College | Brown Theodore | N 36 16/11/93 \$220,494 | 0 | CLASSMAN 94-NN-019 | | |
| (AASERT94) DESIGN OF AUTOMATED MANUFACTURING SYSTEMS AND THEIR CONTROLLERS Rutgers, The State, University | Boucher Thomas | N 36 16/11/93 \$137,742 | 0 | CLASSMAN 94-NN-020 | | |
| (AASERT94) RESEARCH TRAINING ON TARGET DETECTION & CLASSIFICATION WITH SYNTHETIC Univ of Florida | Li Jian | N 36 16/11/93 \$61,387 | 0 | SJOCREN 94-NN-021 | | |
| (AASERT94) DESIGNING OPTIMAL ACTUATION AND SENSING SYSTEMS Virginia Polytechnic Inst & State Univ | Burns John | N 36 16/11/93 \$193,761 | A | JACOB 94-NN-022 | | |
| | | | | | 0192,244 01/94/94 \$193,761 | |

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| | | | | | | |
| ASSERT94/ APPLICATION OF GEOMETRIC INVARIANTS TO COMPUTER VISION | Univ of Nebraska | Bhattacharya | N 36 16/11/93 \$63,000 | A SJOGREN 94-NR-023 | \$63,000 01/06/94 | |
| CAASERT94) ROBUST CONTROL THEORY AND APPLICATIONS | California Institute of Technology | Doyle | N 36 16/11/93 \$125,609 | A JACOBS 94-NR-024 | \$125,609 01/06/94 | |
| CAASERT94) VORTEX CORE DYNAMICS, COMPLEX HELICAL WAVE DECOMPOSITION , ORGANIZATION OF FINE-SCALE TURBULENCE , ETC. | Univ of Houston | Hussain | N 36 16/11/93 \$120,201 | D MACHMAN 94-NR-025 | | |
| CAASERT94) CFU RESEARCH TRAINING PROGRAM FOR MINORITY ENGINEERING UNDERGRADUATE STUDENTS | Alabama A&M University | Liam | N 36 16/11/93 \$64,009 | D JACOBS 94-NR-026 | \$104,433 01/06/94 | |
| CAASERT94) MOTION PLANNING FOR ENERGY MANAGEMENT IN AUTONOMOUS VEHICLES | Boston University | Baillieul | N 36 16/11/93 \$104,433 | A JACOBS 94-NR-027 | \$104,433 01/06/94 | |
| ASSERT94/OPTICALLY IMPLEMENTED WAVELET SIGNAL PROCESSING FOR WIDEBAND RADAR SYSTEMS | Stevens Institute of Technology | Zandu | N 36 16/11/93 \$136,057 | D SJOGREN 94-NR-028 | | |
| CAASERT94) STRUCTURE AND CONTROL OF THE WALL REGION IN A TURBULENT BOUNDARY LAYER/TRAINING | Cornell University | Lumley | N 36 16/11/93 \$151,032 | D JACOBS 94-NR-029 | \$83,022 01/06/94 | |
| CAASERT94) PERFORMANCE MEASURES FOR ANALYZING BROADBAND RESPONSE OF DIVERSE SENSORS | Iyousse University | Saker | N 36 16/11/93 \$83,022 | A MACHMAN 94-NR-030 | \$83,022 01/06/94 | |
| CAASERT94) WAVE PROPAGATION IN COMPLEX MEDIA | Virginia Polytechnic Inst & State Univ | Kohler | N 36 16/11/93 \$110,111 | A MACHMAN 94-NR-031 | \$110,111 01/06/94 | |

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| ASSERT94/AUGMENTATION TO THE "FORMAL DEFINITION OF AN INHERENTLY UNKNOWN LANGUAGE SPECIFICATION LANGUAGE" RESEARCH EFFORT Univ of Texas, El Paso | Daniel Cooke | N 36 16/11/93 \$178,416 | D SUDDARTH 94-NR-032 | 6134-946 01/06/94 6136-684 |
| CAASERT94) VOID NUCLEATION AND GROWTH IN NONLINEAR SOLIDS Univ of Virginia | Horgan | N 36 16/11/93 \$136,604 | A WACHMAN 94-NR-033 | 6134-946 01/06/94 6136-684 |
| ASSERT94/ADAPTIVE RECONFIGURATION ALGORITHMS FOR REAL-TIME DISTRIBUTED SYSTEMS Univ of Massachusetts | Gonz | N 36 16/11/93 \$153,520 | D SUDDARTH 94-NR-034 | 6134-946 01/06/94 6136-684 |
| ASSERT94/AUGMENTATION FOR CONCEPTS, METHODS, & TOOLS FOR DESIGNING DEPENDABLE DISTRIBUTED SYSTEMS Univ of California, San Diego | Cristian Flaviu | N 36 16/11/93 \$171,620 | A SUDDARTH 94-NR-035 | 6134-946 01/06/94 6136-684 |
| CAASERT94) A FINITE DIFFERENCE TIME DOMAIN BASED SOFTWARE FOR THE CHARACTERIZATION OF SUB-MM WAVEGUIDES AND COMPONENTS (FOTO-SWW) Univ of Michigan | Linda Katchi | N 36 16/11/93 \$155,794 | D WACHMAN 94-NR-036 | 6134-946 01/06/94 6136-684 |
| CAASERT94) STATE SPACE IDENTIFICATION AND ACTIVE STRUCTURAL CONTROL FOR THE ACTEX FLIGHT EXPERIMENT Univ of Michigan | Dennis Gernstein | N 36 17/11/93 \$104,433 | A JACOBS 94-NR-037 | 6105-797 01/06/94 6105-797 |
| CAASERT94) INTELLIGENT CONTROL OF MATERIALS PROCESSES Univ of Cincinnati | Patrick Garrett | N 36 17/11/93 \$90,778 | A JACOBS 94-NR-038 | 6105-797 01/06/94 6105-797 |
| CAASERT94/RIME: RETRIEVAL OF INFORMATION FROM A MULTIPROCESSOR ENGINE George Mason University | Stewart Clayton | N 36 17/11/93 \$94,244 | D SUDDARTH 94-NR-039 | 6105-797 01/06/94 6105-797 |
| CAASERT94/SUPPLEMENTAL SUPPORT FOR RESEARCH ON LEARNING OBJECT AND SCENE RECOGNITION STRATEGIES Univ of Massachusetts | Egaard Riesman | N 36 17/11/93 \$207,950 | D WAKSMAN 94-NR-040 | 6105-797 01/06/94 6105-797 |

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| AASERT34/THCPMC PHYSICAL INVARIANTS FOR MULTISENSORY COMPUTER VISION Univ of Virginia | Nandhakumar Nagaraj | N 36 17/11/93 \$104,384 | D MAKSAN 94-MM-041 | | |
| HF WAVE PROPAGATION AND IONOSPHERIC MODELLING Univ of California, Los Angeles | Ashour-Abdellatif Mai Y. | N 36 22/11/93 \$516,110 | N 36 22/11/93 \$104,384 | MACHMAN 94-MM-042 | |
| WAVELET INVERSIONS OF ELASTIC WAVE AND XRAY MONODESTRUCTIVE EVALUATION OF DATA FROM HIGH-TECHNOLOGY MATERIALS Univ of Missouri | Defacio Brian | N 36 22/11/93 \$223,401 | D SJOGREN 94-MM-043 | | |
| UNIVERSAL CYCLES AND PARTIALLY ORDERED SETS Arizona State University | Hurlbert Glenn | N 36 22/11/93 \$118,013 | D CLASSMAN 94-MM-044 | | |
| SINGULARITY FORMATION ON STRESSED SURFACES AS A PRECURSOR OF FRACTURE North Carolina State University | Takobson B. | N 36 22/11/93 \$191,918 | D MACHMAN 94-MM-045 | | |
| DISTRIBUTED DETECTION THEORY AND DATA FUSION Syracuse University | Varshney Hung-Hsia and Chao | N 12 22/11/93 \$63,659 | A SJOGREN 94-MM-047 | | \$63,659 01/03/94 \$63,659 |
| AA5-RT94/PRIORITY JOINT MANAGEMENT FOR ATM SWITCHES Polytechnic University | | N 36 22/11/93 \$250,947 | D CLASSMAN 94-MM-048 | | |
| WAVLETS, SIGNAL PROCESSING, & MATRIX COMPUTATION Air Force Institute of Technology | Suter Bruce | N 12 24/11/93 \$121,111 | A SJOGREN 94-MM-049 | | |
| THERMOPHYSICAL INVARIANTS FOR OBJECT RECOGNITION Univ of Virginia | | N 12 29/11/93 \$35,045 | D MAKSAN 94-MM-050 | | |

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| REAL TIME MEDICAL IMAGING | National Academy of Sciences | | | | | | | |
| Lavery | John | N 24 29/11/93 \$58,000 | D 0 MACHMAN 94-NR-052 | | | | | |
| COMPLEX DYNAMICS | | | | | | | | |
| Univ of Illinois - Urbana Champaign | Hinkkanen | N 36 29/11/93 \$84,718 | D 0 MACHMAN 94-NR-053 | | | | | |
| ESTIMATION WITH MULTISENSOR-MULTISCAN DETECTION FUSION | Aime | | | | | | | |
| Univ of Connecticut | Yankov | R 12 29/11/93 \$57,745 | A 0 GLASSMAN 94-NR-054 | | | | | |
| PARALLEL DATA STRUCTURES & ALGORITHMS FOR NETWORK OPTIMIZATION | | | | | | | | |
| Univ of Central Florida | Marsingh | N 36 29/11/93 \$543,539 | D 0 GLASSMAN 94-NR-055 | | | | | |
| ASSERT 94/ADVANCED HARD REAL-TIME OPERATING SYSTEMS: THE MARUTI PROJECT | Dee | | | | | | | |
| Univ of Maryland | Ashok Agrawal | N 36 01/12/93 \$18,829 | D 0 WAKSHAN 94-NR-056 | | | | | |
| ASSERT 94/INFERENCE AND MODELING FOR REPAIRABLE SYSTEMS AND SOFTWARE RELIABILITY | | | | | | | | |
| Univ of Missouri | Asit Basu | N 36 01/12/93 \$74,172 | A 0 SJOGREN 94-NR-057 | | | | | |
| ASSERT 94/METHODS & TOOLS FOR ENGINEERING DISTRIBUTED OBJECT - ORIENTED SYSTEMS | | | | | | | | |
| Syracuse University | Gary Craig | N 36 01/12/93 \$218,433 | D 0 WAKSHAN 94-NR-058 | | | | | |
| ASSERT 94/ SUPPLEMENT TO EXPLOITING CHAS IN OVERSAMPLED A/D CONVERTERS | | | | | | | | |
| Univ of California, Berkeley | Zakher Avidel | N 36 01/12/93 \$249,000 | A 0 SJOGREN 94-NR-059 | | | | | |
| ASSERT 94/ HIGH PERFORMANCE COMPUTING FOR THE PLANNING INITIATIVE | | | | | | | | |
| Univ of Maryland | Hendler James | N 36 01/12/93 \$100,000 | A 0 WAKSHAN 94-NR-060 | | | | | |

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| (CAASERT94) GRADUATE STUDENT SUPPORT FOR ANALYTICAL MODELING OF HIGH RATE PROCESSES University of Alabama | Jones | N 36 02/12/93 \$164,713 | A MACHMAN 94-NR-061 | 9164,713 01/09/94 \$164,713 | |
| MULTICHANNEL DECONVOLUTION WITH APPLICATIONS TO SIGNAL & IMAGE PROCESSING American University | Casey | N 15 03/12/93 \$51,171 | A SUJOCEN 94-NR-062 | 926,784 01/06/94 \$51,171 | |
| DETERMINING INPUTS FOR MULTILAYER PERCEPTRONS Air Force Institute of Technology | Bauer, Jr. | N 12 07/12/93 \$28,380 | SUDDARTH 94-NR-063 | | |
| LEARNING MANEUVERS USING NEURAL NETWORK MODELS Georgia Institute of Tech | Atkeson | N 24 07/12/93 \$338,355 | A SUDDARTH 94-NR-064 | 9161,742 01/07/94 \$162,654 | |
| OPERATOR STABLE LANS: GENERALIZED DOMAINS OF ATTRACTION AND APPLICATION Univ of Nevada | Meerschaert | N 36 08/12/93 \$74,238 | D MACHMAN 94-NR-065 | | |
| COMPUTATIONAL & ALGEBRAIC ASPECTS OF PARTIAL DIFFERENTIAL EQUATIONS Univ of Illinois | Rubel | N 36 08/12/93 \$74,375 | D JACOBS 94-NR-066 | | |
| FATIGUE DAMAGE: STOCHASTIC MODELING AND DATA ANALYSIS; Texas Tech University | Chanda | N 36 08/12/93 \$137,013 | D SUJOCEN 94-NR-068 | | |
| DESIGN OF NONLINEAR CONTROLLERS FOR CONSTRAINED DYNAMIC SYSTEMS Univ of California, Davis | Wayne | N 36 08/12/93 \$125,110 | D JACOBS 94-NR-069 | | |
| WARM STARTING INTERIOR POINT METHODS. WITH APPLICATIONS TO SOLVING INTEGER PROGRAMMING PROBLEMS Pennselaer Polytechnic Institute | Mitchell | N 36 08/12/93 \$220,892 | D GLASSMAN 94-NR-070 | | |

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| | | | | | | | | |
| MODELLING/FORCASTING STATISTICAL SOFTWARE RELIABILITY & COSTS WITH DATA INCORPORATING FAILURE TIMES & COVARIATES | Slud | Eric | N 36 08/12/93 \$185,200 | SJOGREN | NACHMAN | 94-NR-072 | 94-NR-073 | 0 |
| ANALYSIS OF MODELS FOR MICROSTRUCTURE | Carnegie-Mellon University | Brandon | N 36 08/12/93 \$377,364 | Deborah | NACHMAN | 94-NR-073 | 94-NR-073 | 0 |
| DAVIDSON'S COLLINEAR SCALING ALGORITHMS THAT EXTEND QUASI-NEWTON METHODS FOR OPTIMIZATION | Washington State University | Ariyavansu | N 12 17/12/93 \$93,532 | Ko. | GLASSMAN | 94-NR-074 | 94-NR-074 | 0 |
| SCALABLE DATA PARALLEL ALGORITHMS & IMPLEMENTATION FOR VISION | Univ of Southern California | Neftalia | N 36 20/12/93 \$399,990 | Ramakant | NAKSHAN | 94-NR-076 | 94-NR-076 | A |
| NONLINEAR CHAOTIC SYSTEMS ENGINEERING | Utah State, University | Gunderson | N 24 20/12/93 \$166,689 | R. | JACOBS | 94-NR-077 | 94-NR-077 | 0 |
| MATHEMATICAL MODELING IN PLASMA PHYSICS | Clark University | Sternberg | N 36 20/12/93 \$106,341 | Natalia | NACHMAN | 94-NR-078 | 94-NR-078 | 0 |
| FUZZY LOGIC BASED INTELLIGENT ANESTHESIA MONITOR MANAGEMENT SYSTEM WITH MULTIPLE FEEDBACKS & INTEGRATED PATIENT MONITORING | Saint Mary's University | Rahbar | N 36 21/12/93 \$772,724 | Maghsoudi | SJOGREN | 94-NR-079 | 94-NR-079 | 0 |
| PROPERTIES OF GRAPHS AND THEIR APPLICATIONS | Georgia State University | Zhou | N 36 21/12/93 \$104,883 | Huishan | GLASSMAN | 94-NR-080 | 94-NR-080 | 0 |
| OPTIMAL FEEDBACK CONTROL OF NONLINEAR PARTIAL DIFFERENTIAL | Univ of South Florida | Yau | N 36 22/12/93 \$112,547 | Tuncheng | JACOBS | 94-NR-081 | 94-NR-081 | 0 |

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| W 36 | A | | \$42,123 |
| 2/2/93 | | MACHIAN | 01/05/94 |
| \$129,724 | | | \$129,724 |

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